ICOM

SERVICE MANUAL

DUAL BAND FM TRANSCEIVER

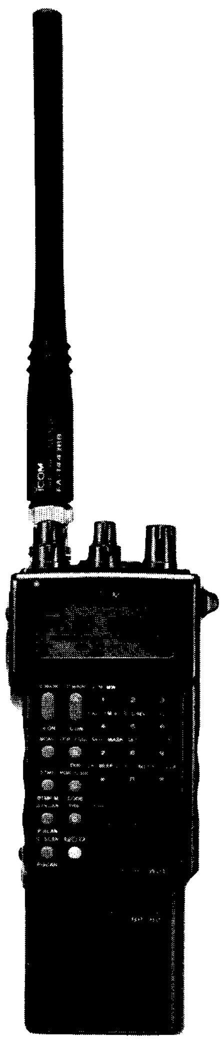
IC-W2A
IC-W2E

Icom Inc.

INTRODUCTION

This service manual describes the latest service information for the IC-W2A/E DUAL BAND FM TRANSCEIVER at the time of publication.

MODEL	VERSION No.	VERSION	SYMBOL
IC-W2A	#05	U.S.A.	USA
	#07	Australia	AUS
	#09	Asia	SEA
IC-W2E	#02	Europe	EUR-1
	#03	U.K.	UK
	#04	Italy	EUR-2



DANGER

NEVER connect the transceiver to an AC outlet or to a DC power supply that uses more than 16 V. This will ruin the transceiver.
DO NOT expose the transceiver to rain, snow or any liquids.
DO NOT reverse the polarities of the power supply when connecting the transceiver.
DO NOT apply an RF signal of more than 20 dBm (100 mW) to the antenna connector. This could damage the transceiver's front end.

ORDERING PARTS

Be sure to include the following four points when ordering replacement parts:

1. 10-digit order numbers
2. Component part number and name
3. Equipment model name and unit name
4. Quantity required

<SAMPLE ORDER>

1130003760	IC	TC4S71F	IC-W2A/E	LOGIC UNIT	5 pieces
8810004870	Screw	PH M2×2.5 ZK	IC-W2A/E	Top cover	10 pieces

Addresses are provided on the inside back cover for your convenience.

REPAIR NOTES

1. Make sure a problem is internal before disassembling the transceiver.
2. **DO NOT** open the transceiver until the transceiver is disconnected from its power source.
3. **DO NOT** force any of the variable components. Turn them slowly and smoothly.
4. **DO NOT** short any circuits or electronic parts. An insulated tuning tool **MUST** be used for all adjustments.
5. **DO NOT** keep power ON for a long time when the transceiver is defective.
6. **DO NOT** transmit power into a signal generator or a sweep generator.
7. **ALWAYS** connect a 30 dB~40 dB attenuator between the transceiver and a deviation meter or spectrum analyzer when using such test equipment.
8. **READ** the instructions of test equipment thoroughly before connecting equipment to the transceiver.

TABLE OF CONTENTS

SECTION 1 SPECIFICATIONS

■ GENERAL

- Frequency coverage :

MODEL	VERSION	FREQUENCY COVERAGE	
		144 MHz	430 (440) MHz
IC-W2A	U.S.A.	140~150 MHz* (Tx) 136~174 MHz* (Rx)	440~450 MHz
	Australia	144~148 MHz	430~440 MHz
	Asia	140~150 MHz* (Tx) 138~174 MHz* (Rx)	
IC-W2E	Italy		
	Europe	144~146 MHz	
	U.K.		

*Guaranteed frequency coverage is 144~148 MHz.

- Mode : F3 (FM)
- Antenna impedance : 50 Ω (unbalanced)
- Usable temperature range : −10°C~+60°C (+14°F~+140°F)
- Frequency stability : ±5 ppm (0°C~+50°C)
- External DC power supply : 6~16 V DC (negative ground)
- Current drain :

CONDITION			144 MHz	430 MHz
TRANSMIT (13.5 V)	High		1.3 A	1.8 A
	Low 1		500 mA	700 mA
RECEIVE (12.5 V)	MONO BAND	Power saved	20 mA*	
		Rated audio output	150 mA	
	DUAL BAND	Power saved	40 mA*	
		Rated audio output	200 mA	

*Average value

- Dimensions : 54 (W)×170 (H)×36 (D) mm; 2.1 (W)×6.7 (H)×1.4 (D) in (U.S.A.)
  54 (W)×135 (H)×36 (D) mm; 2.1 (W)×5.3 (H)×1.4 (D) in (Australia)
  54 (W)×154 (H)×36 (D) mm; 2.1 (W)×6.1 (H)×1.4 (D) in (Asia, Europe, U.K., Italy)
- Weight : 530 g, 1.2 lb (U.S.A.)
  450 g, 15.9 oz (Asia, Europe, U.K., Italy)
  400 g, 14.1 oz (Australia)

■ RECEIVER

- Sensitivity : Less than 0.16 μV for 12 dB SINAD
- Receive system : Double-conversion superheterodyne
- Intermediate frequencies : VHF; 1st 30.850 MHz, 2nd 455 kHz
  UHF; 1st 35.800 MHz, 2nd 455 kHz
- Selectivity : More than 15 kHz/−6 dB, less than 30 kHz/−60 dB
- Audio output power : More than 0.18 W at 10% distortion with an 8 Ω load
- Spurious rejection : Less than −60 dB

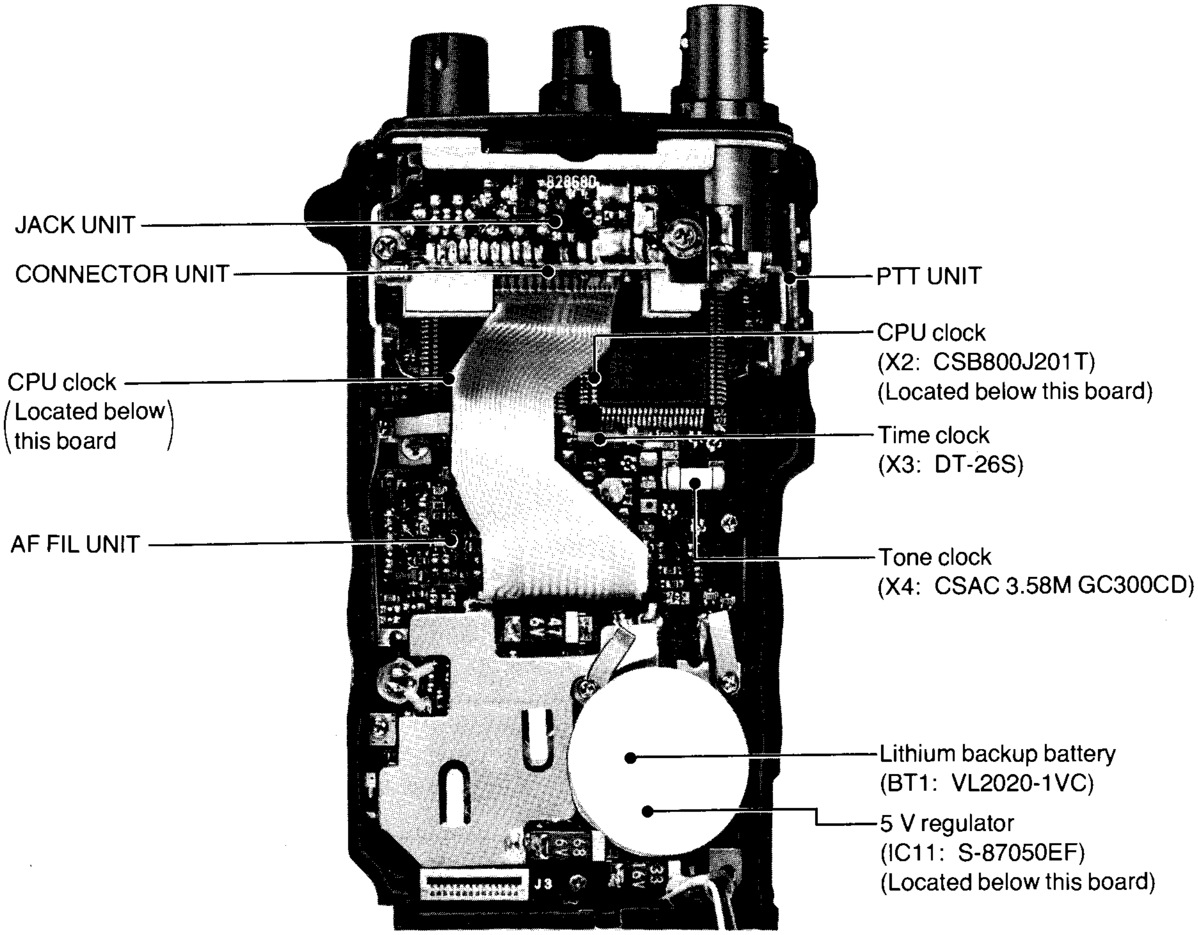
■ TRANSMITTER

- Output power (13.5 V) : 5 W (HIGH), 3.5 W (LOW3), 1.5 W (LOW2), 0.5 W (LOW1)
- Modulation system : Variable reactance frequency modulation
- Max. frequency deviation : ±5 kHz
- Spurious emissions : Less than −60 dB

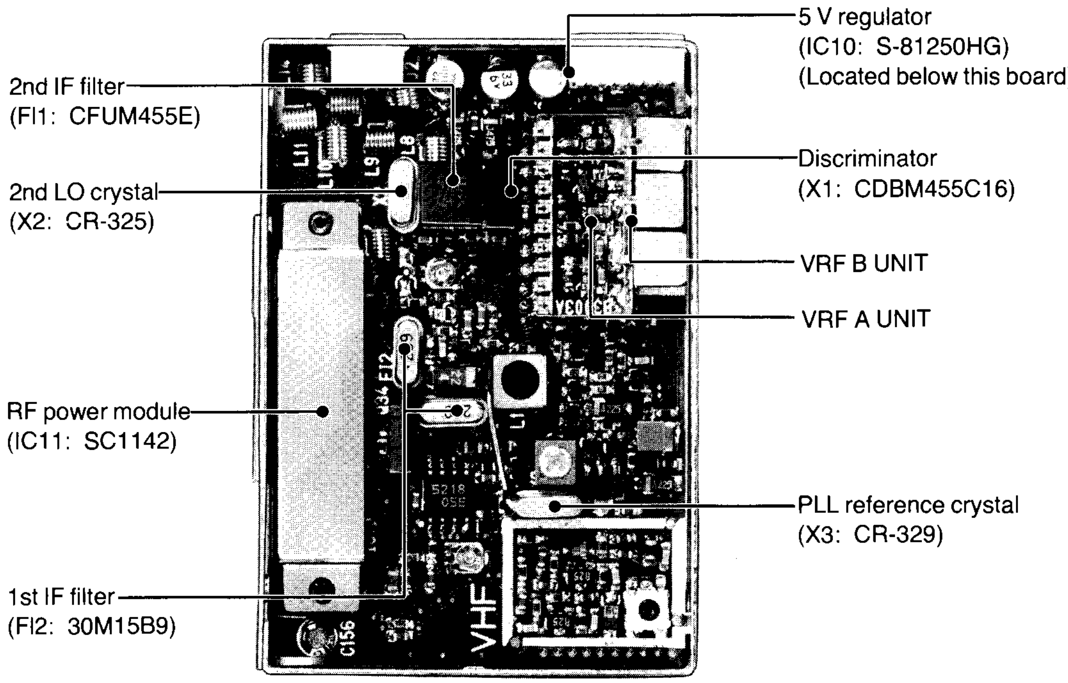
All stated specifications are subject to change without notice or obligation.

SECTION 2 INSIDE VIEWS

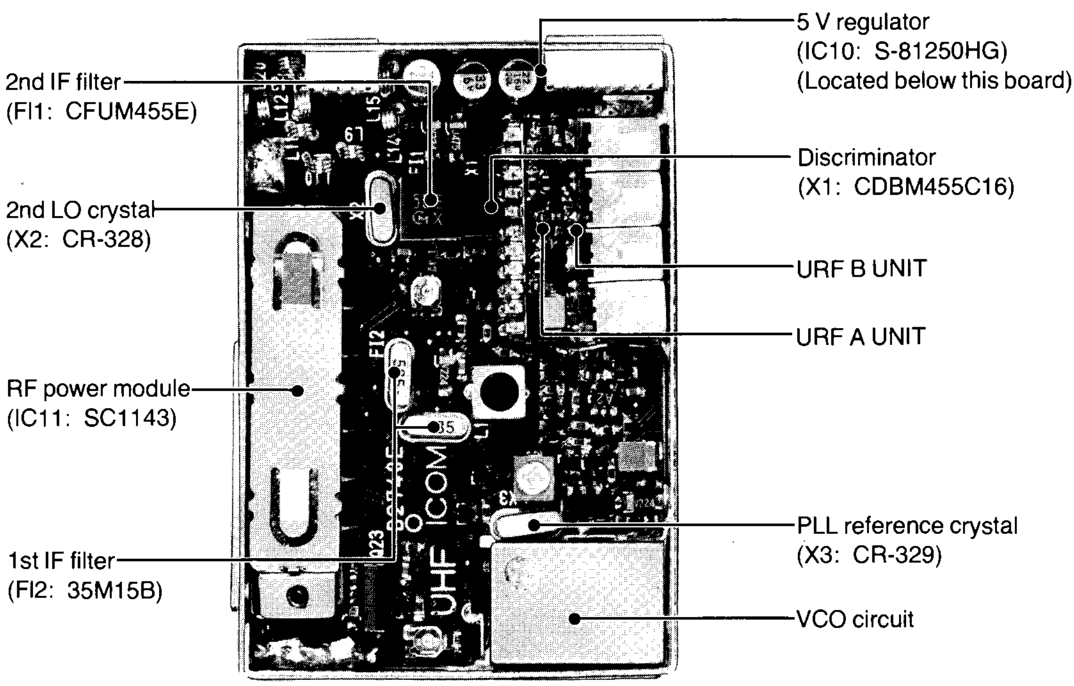
2-1 LOGIC UNIT



2-2 VHF RF UNIT



2-3 UHF RF UNIT



SECTION 3 CIRCUIT DESCRIPTION

3-1 VHF RECEIVER CIRCUITS

3-1-1 ANTENNA SWITCHING CIRCUIT (CONNECTOR AND VHF RF UNITS)

The received signals enter the CONNECTOR UNIT and are divided into VHF RF signals and UHF RF signals. The VHF RF signals pass through the low-pass filter (L3~L5, C7~12). The signals are applied to the bandpass filter (L10, L11, L14, C56~60) and then to the antenna switching circuit.

The antenna switching circuit employs a $\lambda/4$-type diode switching system. While receiving, D23 turns OFF. The receive signals which are applied to the VRF A UNIT pass through a low-pass filter (L8, L9, C52~54, D9).

3-1-2 RF AND 1st MIXER CIRCUITS (VRF A AND VHF RF UNITS)

The RF circuit amplifies the received signals up to the level needed at the 1st mixer circuit. The 1st mixer circuit converts the received signals to a fixed frequency of the 1st IF signal with a PLL output frequency. By changing the PLL frequency, only the desired frequency can pass through a pair of crystal filters at the next stage of the 1st mixer.

The VHF RF signals from the antenna switching circuit are amplified at Q1 and Q2 and are then converted to a 1st IF signal at Q6. The frequency of the 1st IF signal is 30.85 MHz. Q6 converts the RF signal using the V PLL output signal from D16.

The VHF RF circuit adopts a tuned bandpass filter circuit that tunes the filters to the center frequency of the receiving signal using varactor diodes (D2, D4, D5). A PLL lock voltage is used for the filter tuned signal.

3-1-3 IF CIRCUIT (VHF RF UNIT)

The 1st IF signal passes through the crystal filter (FI2) to suppress out-of-band signals. The signal is then amplified at Q5 and is applied to the FM IF IC (IC1, pin 16).

IC1 contains the 2nd mixer, local oscillator, limiter amplifier, quadrature detector, active filter and S-meter detector circuits. The local oscillator section and X2 generate 30.395 MHz for the 2nd LO signal.

The 1st IF signal is applied to a 2nd mixer section of IC1 (pin 16) and is then mixed with a 2nd LO signal for conversion to a 455 kHz 2nd IF signal.

The 2nd IF signal from the 2nd mixer (IC1, pin 3) passes through a ceramic filter (FI1) where unwanted signals are suppressed. It is then amplified at the limiter amplifier section (IC1, pin 5) and applied to the quadrature detector section (IC1, pin 8) and ceramic discriminator (X1) to demodulate the 2nd IF signal into an AF signal. The AF signal is output from IC1 (pin 9).

3-1-4 AF CIRCUIT (AF FIL AND AF UNITS)

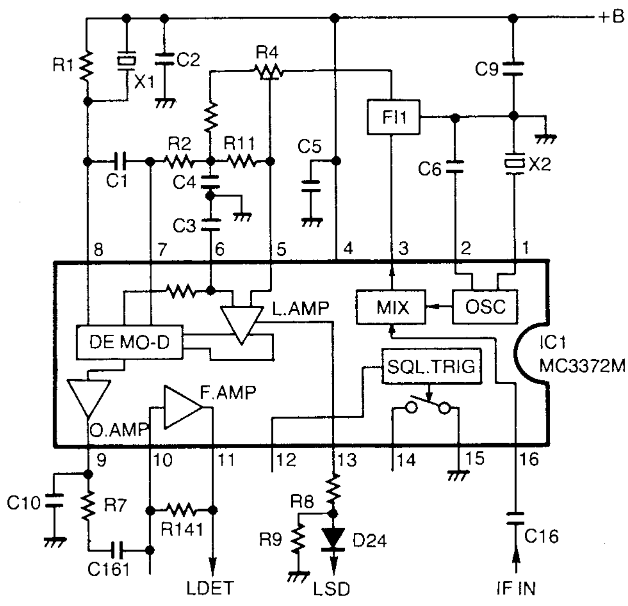
The AF signals from the VHF RF UNIT are applied to the bandpass filter (Q6). These signals are then passed through the VOL control and amplified at the power amplifier (IC1) on the AF UNIT to obtain the speaker driving level.

3-1-5 SQUELCH CIRCUIT (VHF RF AND LOGIC UNITS)

In an FM receiver, noise signals are automatically suppressed once a signal with voice components is received. The noise squelch circuit acts in accordance with this phenomenon.

Noise components in the AF signal (20 kHz and above) from IC1 (pin 11) are applied to the LOGIC UNIT. The noise signal passes through the SQL control (R1) and is amplified at the active filter (IC7). This signal is rectified at D29 and is converted to DC voltage. This voltage is applied to Q30 or to IC16. Thus, while receiving no signal, the "LOW" signal is output from Q30 as the "L BUSY" signal.

While IC16 is turning over the rectified DC voltage, the "L MUT" signal is controlling the AF MUTE circuit (Q4, Q5). When the "L MUT" signal is "LOW", the AF MUTE circuit turns ON.



VHF IF CIRCUIT

3-2 UHF RECEIVER CIRCUITS

3-2-1 ANTENNA SWITCHING CIRCUIT (CONNECTOR AND UHF RF UNITS)

The received signals enter the CONNECTOR UNIT and are divided into VHF RF signals and UHF RF signals. The UHF RF signals pass through the high-pass filter (L1, L2, C2~C6) and are applied to the bandpass filter (L11~L13, L20, C42~C49). These UHF RF signals are then applied to the antenna switching circuit.

While receiving, D19 turns OFF, and the receive signals are applied to the URF A UNIT through a low-pass filter (L9, L10, C39, C41, D21, D22).

3-2-2 RF AND 1st MIXER CIRCUITS (URF A AND UHF RF UNITS)

The UHF RF signals are amplified at Q2 and Q1, and then are converted to a 1st IF signal at Q2. The frequency of the 1st IF signal is 35.800 MHz.

Q2 on the UHF RF UNIT converts the RF signal using the U PLL output coming from D9.

The UHF RF circuit employs a helical coil bandpass filter circuit (L1, L2) to suppress out-of-band signals.

3-2-3 IF, AF AND SQUELCH CIRCUITS

These are the same as the ones commonly used with the VHF receiver circuit. Refer to SECTION 1-1-3~1-1-5 for details.

3-3 VHF TRANSMITTER CIRCUITS

3-3-1 MIC CONTROL CIRCUIT (LOGIC UNIT)

The mic control circuit controls the external or internal audio, DTMF tone and TONE CALL signals.

An audio signal from the external microphone is applied to the microphone control circuit (IC17, IC18, Q1, Q2). The audio signal passes through the attenuator (R19~R21) and is connected to the internal microphone. The audio signal amplified at IC20 is applied to the VHF RF UNIT. When the DTMF tone or TONE CALL signal outputs to the mic amp circuit, Q5 turns OFF the audio signal to prevent malfunctioning.

3-3-2 MIC AMP CIRCUIT (VHF RF UNIT)

The mic amplifier circuit amplifies audio signals with 6 dB/oct. of pre-emphasis from the microphone to a level needed for the modulation circuit.

The mic amplifier circuit has a low level amplifier with pre-emphasis (IC9a) and a limiter amplifier (IC9b).

3-3-3 MODULATION CIRCUIT (VHF RF UNIT)

The modulation circuit modulates the VCO oscillating signal (RF signal) using the microphone audio signal.

The audio signal from IC9 (pin 1) changes the reactance of a varactor diode (D10) to modulate the oscillated signal at the TX VCO (Q23, Q24). The oscillated signal is buffer-amplified at Q25 and Q26 and is then applied to the drive amplifier circuit.

3-3-4 DRIVE AND POWER AMPLIFIER CIRCUITS (VHF RF UNIT)

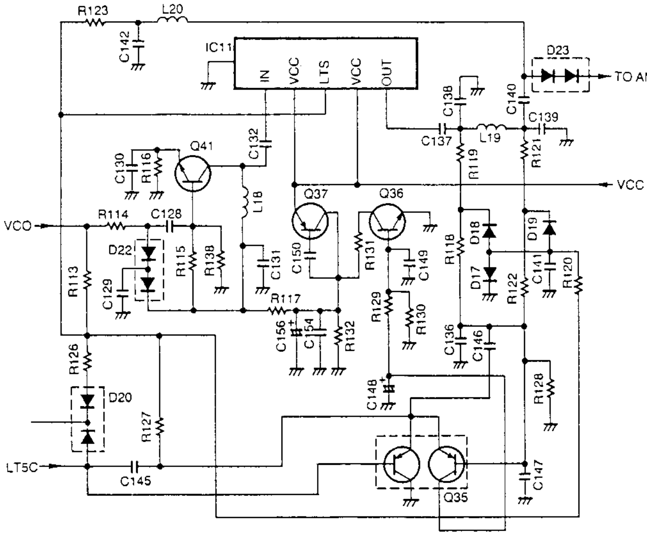
IC11 is a power module which provides a stable 5 W (DC13.5 V) of output power.

The drive amplifier (Q41) and power amplifier (IC11) amplify the VCO oscillating signal to an output level. The output signal passes through the APC circuit (D17~19) and bandpass circuit and is applied to the antenna connector. Collector voltage for the drive amplifier is controlled by the APC circuit.

3-3-5 APC CIRCUIT (VHF RF UNIT)

An APC circuit protects the power module (IC11) from a mismatched output load and selects either HIGH or LOW output power.

The APC circuit (D17~19, L19, R119, R121, C138, C139) detects the output signal from the power module (IC11, pin 5). Q35 compares the APC detected voltages and reference voltages. When the APC detected voltages are higher than the reference voltages, Q35 reduces the collector voltage of Q36 and Q37. This voltage is applied to the drive amplifier (Q41) to reduce the RF output power.



VHF APC CIRCUIT

3-4 UHF TRANSMITTER CIRCUITS

3-4-1 MIC AMP CIRCUIT (UHF RF UNIT)

The audio signal from the LOGIC UNIT is applied to the low level amplifier in the mic amplifier circuit with pre-emphasis at IC8a. Then, the audio signal is applied to the limiter amplifier (IC8b).

3-4-2 MODULATION CIRCUIT (UHF RF AND U VCO UNITS)

The audio signal from IC8 (pin 7) changes the reactance of a diode (D1) to modulate the oscillated signal at the VCO circuit (Q1, Q2) on the U VCO UNIT. The oscillated signal is amplified at the buffer amplifiers (Q15, Q33 and IC7) and then is applied to the drive amplifier circuit.

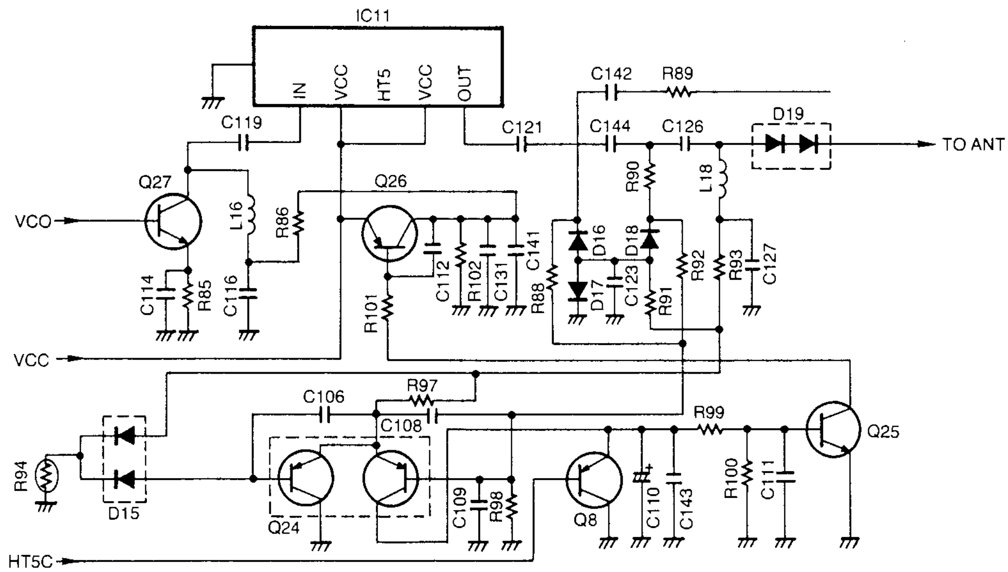
3-4-3 DRIVE AND POWER AMPLIFIER CIRCUITS (UHF RF UNIT)

IC11 is a power module which provides a stable 5 W (DC13.5 V) of output power.

The drive amplifier (Q34, Q27) and power amplifier (IC11) amplify the VCO oscillating signal to an output level. The output signal passes through the APC circuit (D16~18) and bandpass circuit and is applied to the antenna connector. Collector voltage for the drive amplifier (Q27) is controlled by the APC circuit.

3-4-4 APC CIRCUIT (UHF RF UNIT)

The APC circuit detects the output signal from the power module (IC11, pin 5). Q24 compares the voltages detected by the APC to the reference voltages. When a voltage detected by APC exceeds a reference voltage, Q24 reduces the collector voltage of Q25 and Q26. This voltage is applied to the drive amplifier (Q27) to reduce the RF output power.



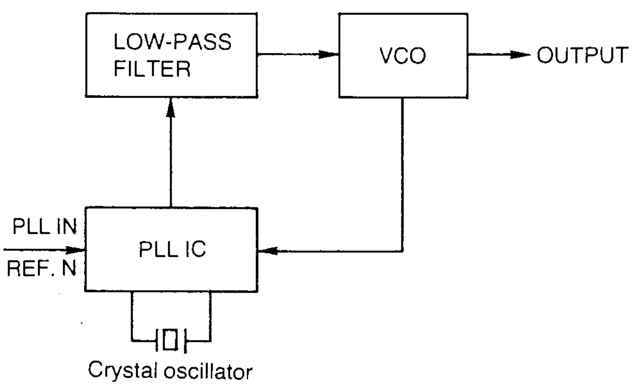
UHF APC AND POWER CIRCUIT

3-5 PLL CIRCUITS

3-5-1 GENERAL (VHF AND UHF RF UNITS)

A PLL circuit provides stable oscillation of the transmit frequency and the receive local frequency. The PLL circuit compares the phase of the divided VCO frequency to the reference frequency. The PLL output frequency is controlled from a crystal oscillator and the divided ratio of a programmed divider.

The PLL circuit, using a one chip PLL IC (VHF: IC8, UHF: IC6), directly generates the transmit and 1st LO frequency with a VCO. The PLL IC sets the divided ratio based on serial data from the CPU on the LOGIC UNIT and compares the phases of a VCO signal and the reference oscillator frequency. The PLL IC detects the out-of-step phase and output from pin 12. The reference frequency is oscillated at X3.



PLL CIRCUIT

3-5-2 VHF CHARGE PUMP AND LOOP FILTER CIRCUITS (VHF RF UNIT)

Phase-detected signals from IC8 are converted to DC voltage by a constant-current circuit (Q17~19) and a lag-loop filter to control the VCO oscillating signals. The PLL lock voltage changes the reactance of varactor diodes in the VCO circuit.

The DC voltage of the VHF PLL is also used for the receiver tuning circuit on the VRF A UNIT.

3-5-3 UHF CHARGE PUMP AND LOOP FILTER CIRCUITS (UHF RF UNIT)

Phase-detected signals from IC6 are converted to DC voltage by a constant-current circuit (Q12, Q13, Q31) and a lag-loop filter to control the VCO oscillating signals. The PLL lock voltage changes the reactance of varactor diodes in the VCO circuit.

3-5-4 VHF VCO CIRCUIT (VHF RF UNIT)

The VCO circuit oscillates the PLL output frequency controlling varactor diodes.

D10, a varactor diode, provides the frequency control. The control signal from IC8 (pin 6) turns Q42 ON or OFF to switch the VCO frequency between transmission and reception.

3-5-5 UHF VCO CIRCUIT (V VCO UNIT)

D1, a varactor diode, provides the frequency control. The control signal from IC6 (pin 6) turns Q14 ON or OFF to switch the VCO frequency between transmission and reception.

3-6 OTHER CIRCUITS

3-6-1 BATTERY CHARGING CIRCUIT (PRT UNIT)

The transceiver has a constant-current regulated circuit for charging the connected battery pack. This circuit charges the battery pack for about 15 hours.

The voltage from the external power supply is divided at D6, R6 and R8. This voltage is then applied to Q2. Q2 controls Q1, and the external power supply charges the battery pack.

3-6-2 S-METER CIRCUIT (VHF AND UHF RF UNITS)

The S-meter signal (VHF: "LSD" line, UHF: "HSD" line) from the VHF/UHF RF UNIT is applied to the meter comparator (VHF: IC9, pin 3; UHF: IC8, pin 3). Pin 2 of the meter comparator receives a reference signal from the CPU. The counting signal is increased step by step.

Pin 1 is "HIGH" when a reference signal is lower than the S-meter signal and becomes "LOW" when a reference signal is higher than the S-meter signal. Pin 1 is applied to the CPU (IC1 or IC2).

3-6-3 VOLTAGE LINES

LINE	DESCRIPTION
VCC	This voltage is supplied from a battery pack or external DC power supply.
L+5M	VHF band common 5 V converted from the VCC at Q27 and Q28 on the VHF RF UNIT.
LR5S	VHF band receive 5 V controlled by the power saver function and LSEND signal line. This voltage is converted from the VCC at Q29 and Q30 on the VHF RF UNIT.
L+5S	VHF band 5 V controlled by the power saver function. This voltage is converted from the VCC at Q31 and Q32 on the VHF RF UNIT.
LT5	VHF band transmit 5 V controlled by the LTMT signal line. This voltage is converted from the VCC at Q33 and Q34 on the VHF RF UNIT.
H+5M	UHF band common 5 V converted from the VCC at Q16 and Q17 on the UHF RF UNIT.
HR5S	UHF band receive 5 V controlled by the power saver function and HSEND signal line. This voltage is converted from the VCC at Q18 and Q19 on the UHF RF UNIT.
H+5S	UHF band 5 V controlled by the power saver function. This voltage is converted from the VCC at Q20 and Q21 on the UHF RF UNIT.
HT5	UHF band transmit 5 V controlled by the HTMT signal line. This voltage is converted from VCC at Q22 and Q23 on the UHF RF UNIT.

SECTION 4 ADJUSTMENT PROCEDURES

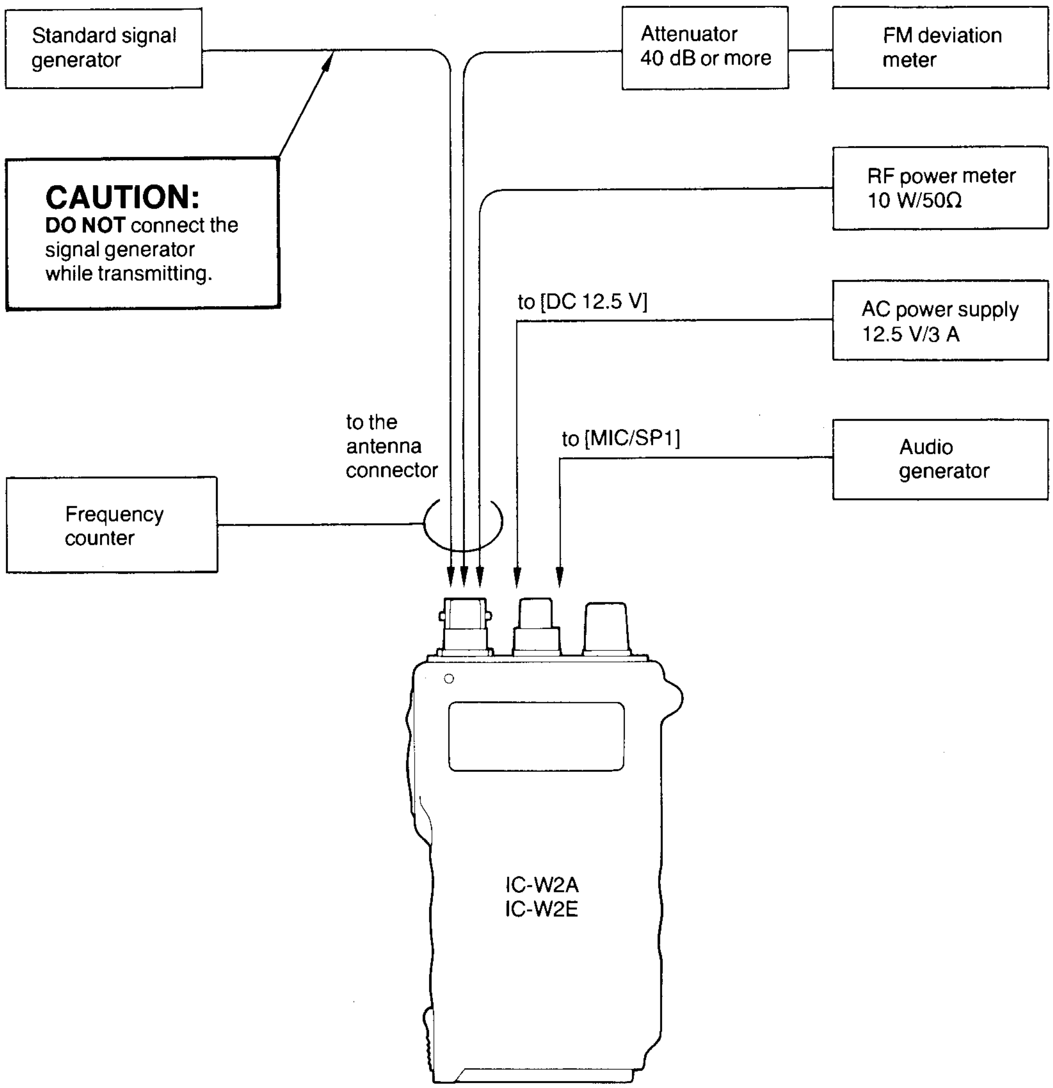
4-1 PREPARATION BEFORE SERVICING

■ REQUIRED TEST EQUIPMENT

EQUIPMENT	GRADE AND RANGE	EQUIPMENT	GRADE AND RANGE
DC power supply	Output voltage : 12.5 V DC 13.5 V DC (Only adjusting output power) Current capacity : 3 A or more	Standard signal generator (SSG)	Frequency range : 0.1~470 MHz Output level : −127~−17 dBm (0.1 μV~32 mV)
		DC voltmeter	Input impedance : 50 kΩ/V DC or better
RF power meter (terminated type)	Measuring range : 1~10 W Frequency range : 0.1~500 MHz Input impedance : 50Ω SWR : 1.2 : 1 or better	Audio generator (AG)	Frequency range : 300~3000 Hz Measuring range : 1~500 mW
		Attenuator	Attenuation : 40 dB or more Capacity : 10 W or more
Frequency counter	Frequency range : 0.1~470 MHz Frequency accuracy : ±1 ppm or better Sensitivity : 100 mV or better	FM deviation meter	Frequency minimum : 470 MHz Measuring range : 0~±10 kHz
Oscilloscope	Frequency range : DC~20 MHz Output range : 0.01~10 V		

CW: Clockwise
CCW: Counterclockwise

■ CONNECTION



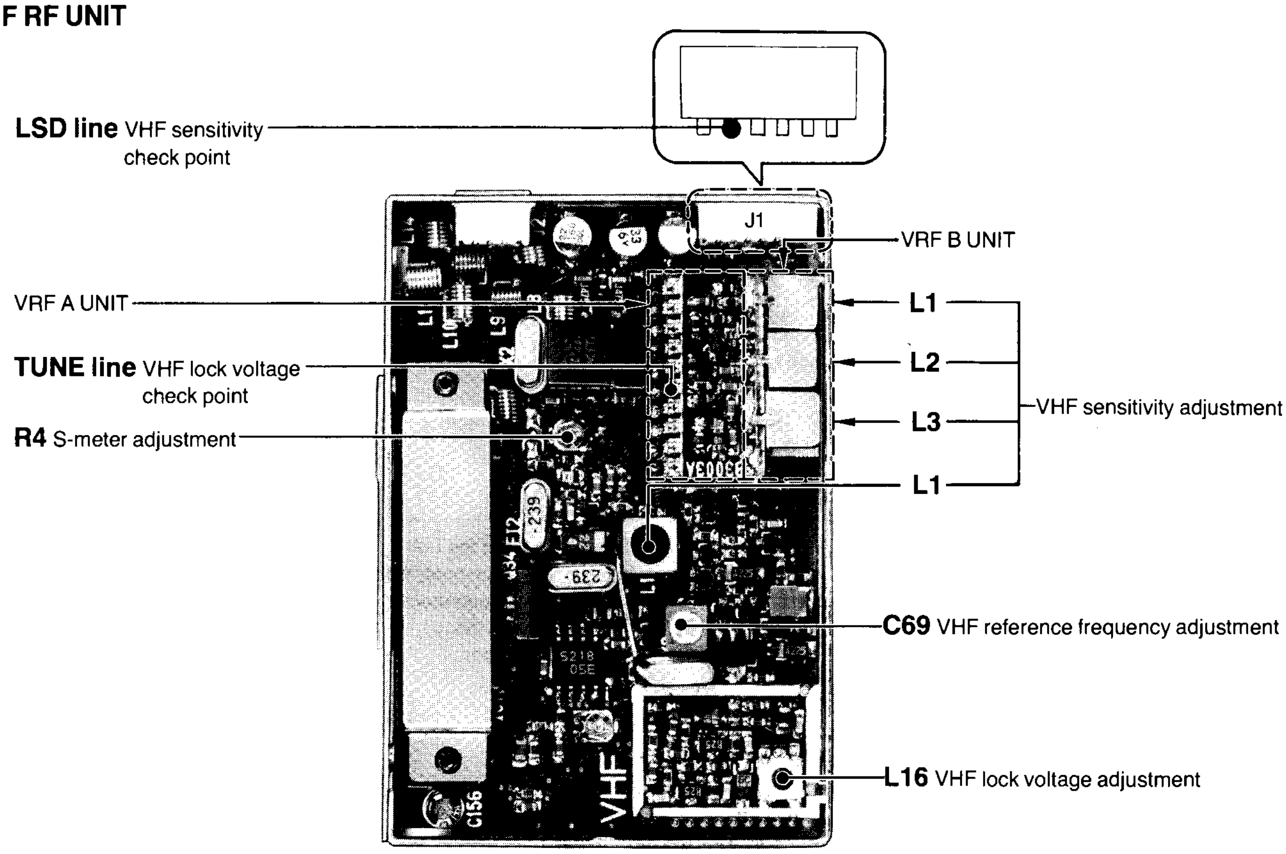
4-2 PLL ADJUSTMENT

ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
VHF LOCK VOLTAGE	1	• Displayed frequency: 145.000 MHz • Adjust either the transmit lock voltage or receive lock voltage (whichever is higher).	VRF A	Connect the DC voltmeter to the TUNE line.	1.6 V	VHF RF	L16
UHF LOCK VOLTAGE	1	• Displayed frequency: 450.000 MHz (USA) 440.000 MHz (All other versions) • Adjust either the transmit lock voltage or receive lock voltage (whichever is higher).	UHF RF	Connect the DC voltmeter to the LV line.	3.0 V	VCO	C3
VHF REFERENCE FREQUENCY	1	• Displayed frequency: 145.000 MHz • Transmitting	Top panel	Loosely couple the frequency counter to the antenna connector.	145.000 MHz	VHF RF	C69
UHF REFERENCE FREQUENCY	1	• Displayed frequency: 440.000 MHz • Transmitting			440.000 MHz	UHF RF	C61

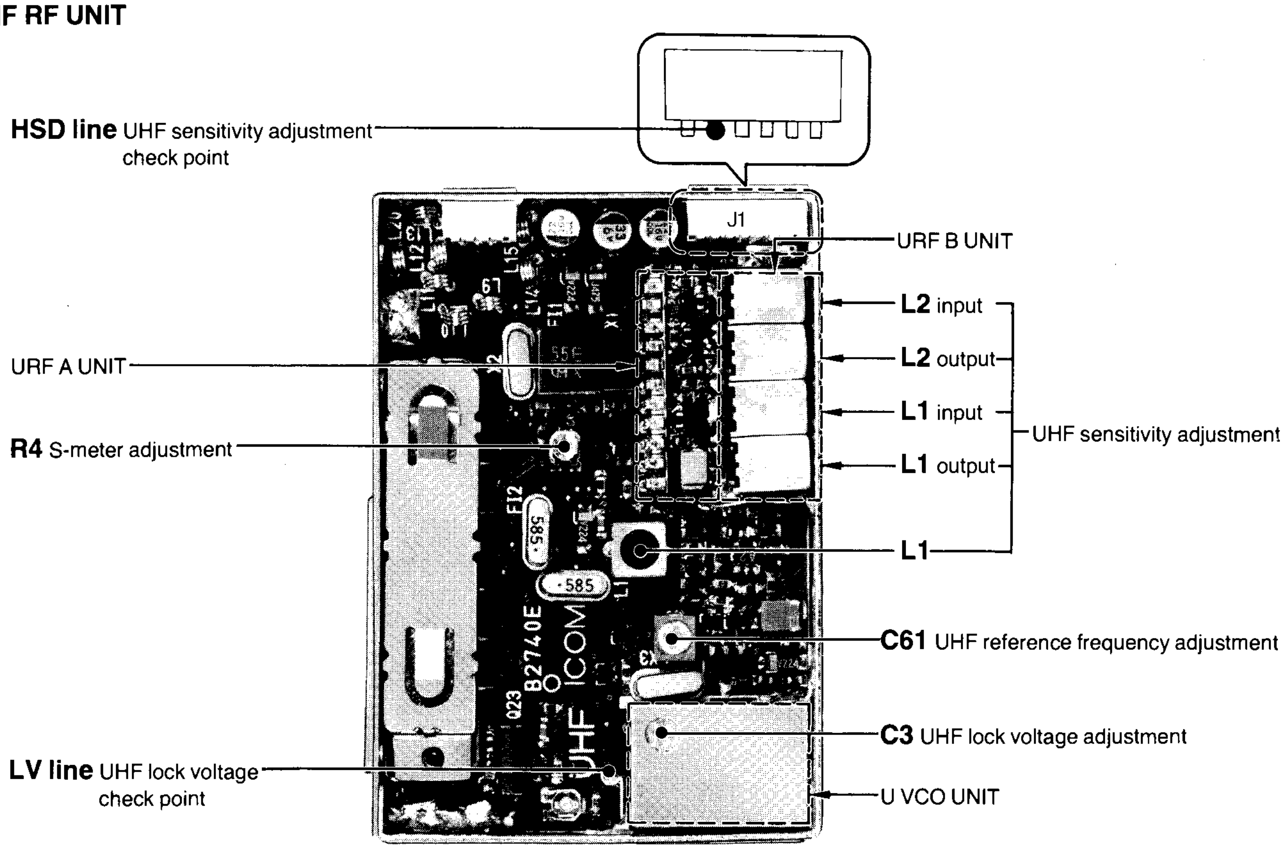
4-3 RECEIVER ADJUSTMENT

ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
VHF SENSITIVITY	1	• Displayed frequency: 145.000 MHz • Connect the SSG to the antenna connector and set as: Level : 20 µV (−81 dBm) MOD. : 1 kHz DEV. : ±3.5 kHz • [VHF SQL] control: CCW • Receiving	VHF RF	Connect the oscilloscope to the LSD line.	Maximum	VRF B	Adjust in sequence L1, L2, L3
						VHF RF	L1
UHF SENSITIVITY	1	• Displayed frequency: 446.000 MHz (USA) 436.000 MHz (All other versions) • Connect the SSG to the antenna connector and set as: Level : 10 µV (−87 dBm) MOD. : 1 kHz DEV. : ±3.5 kHz • [UHF SQL] control: CCW • Receiving	UHF RF	Connect the oscilloscope to the HSD line.	Maximum	URF B	L1: input L2: output
	2	• Displayed frequency: 440.500 MHz (USA) 430.500 MHz (All other versions)					L1: output L2: input
						UHF RF	L1
VHF S-METER	1	• Displayed frequency: 145.000 MHz • Connect the SSG to the antenna connector and set as: Level : 0.32 µV (−117 dBm) MOD. : 1 kHz DEV. : ±3.5 kHz • Receiving	LCD display	S/RF indicator	S3 (4 dots) 	VHF RF	R4
UHF S-METER	1	• Displayed frequency: 440.000 MHz (USA) 430.000 MHz (All other versions) • Connect the SSG to the antenna connector and set as: Level : 0.32 µV (−117 dBm) MOD. : 1 kHz DEV. : ±3.5 kHz • Receiving				UHF RF	R4

■ VHF RF UNIT



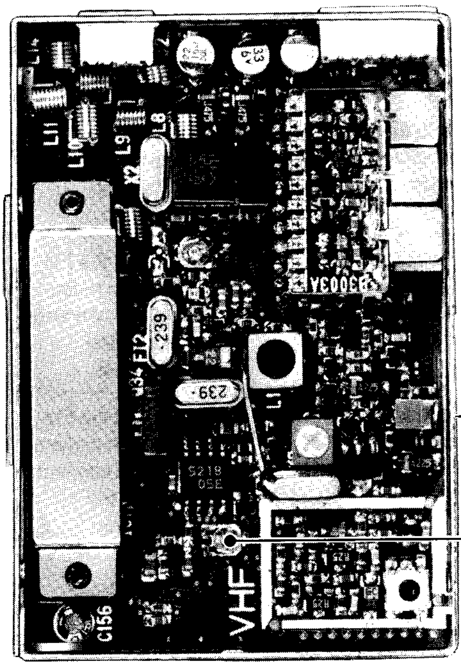
■ UHF RF UNIT



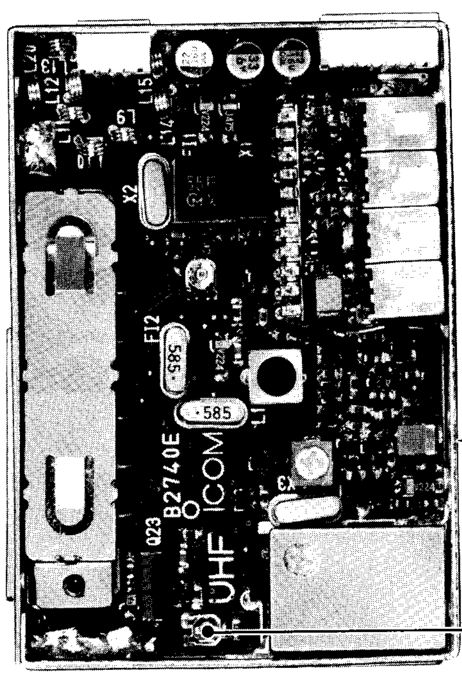
4-4 TRANSMITTER ADJUSTMENT (1)

ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
(Note: When adjusting the output power, adjust according to the power supply requirement of 13.5 V.)							
VHF OUTPUT POWER	1	•Displayed frequency : 145.000 MHz •[HI/LOW] key : HI •Transmitting	Top panel	Connect the RF power meter to the antenna connector.	5.0 W	VHF RF	R55
UHF OUTPUT POWER	1	•Displayed frequency: 445.000 MHz (USA) : 435.000 MHz (All other versions) •[HI/LOW] key : HI •Transmitting			5.0 W	UHF RF	R42
VHF DEVIATION	1	•Displayed frequency: 145.000 MHz •Connect the audio generator to the [MICROPHONE] connector and set as: Level : 160 mV (USA) : 80 mV (All other versions) MOD. : 1.0 kHz •Set the FM deviation meter as: HPF : 50 Hz LPF : 20 kHz De-emphasis : OFF DET : (P-P)/2 •Transmitting	Top Panel	Connect the FM deviation meter to the antenna connector through the attenuator.	4.8 kHz	VHF RF	R104
UHF DEVIATION	1	•Displayed frequency: 445.000 MHz (USA) : 435.000 MHz (All other versions) •Connect the audio generator to the [MICROPHONE] connector and set as: Level : 160 mV (USA) : 80 mV (All other versions) MOD. : 1.0 kHz •Set the FM deviation meter as: HPF : 50 Hz LPF : 20 kHz De-emphasis : OFF DET : (P-P)/2 •Transmitting			4.8 kHz	UHF RF	R73

■ VHF RF UNIT



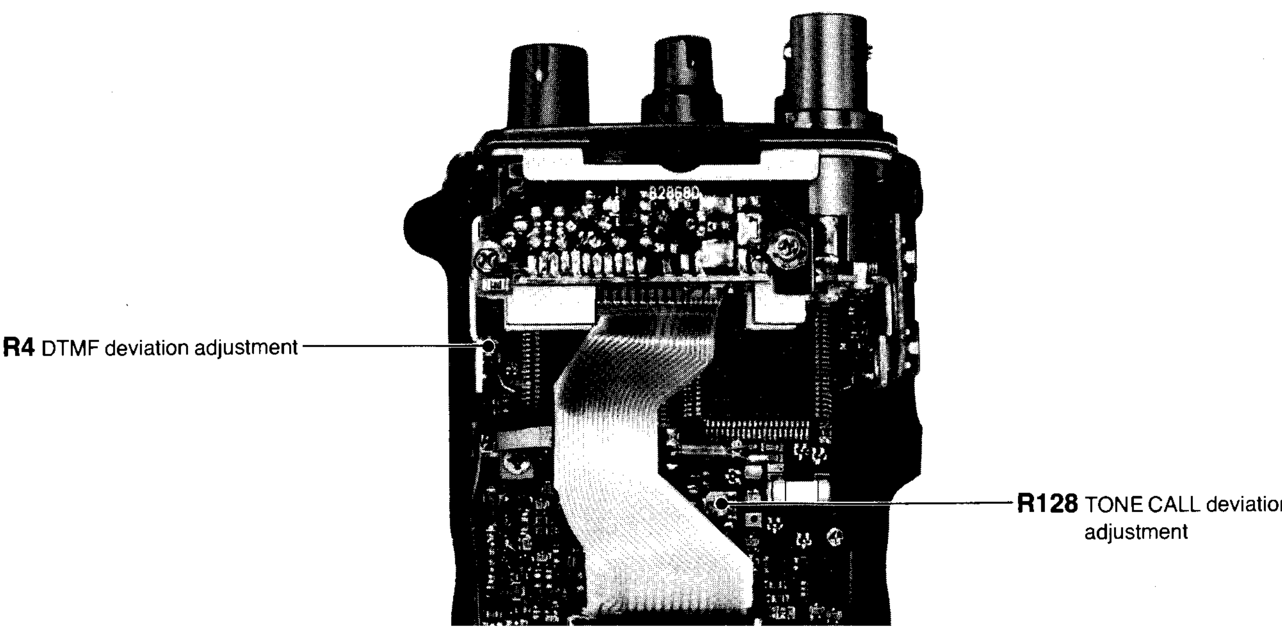
■ UHF RF UNIT



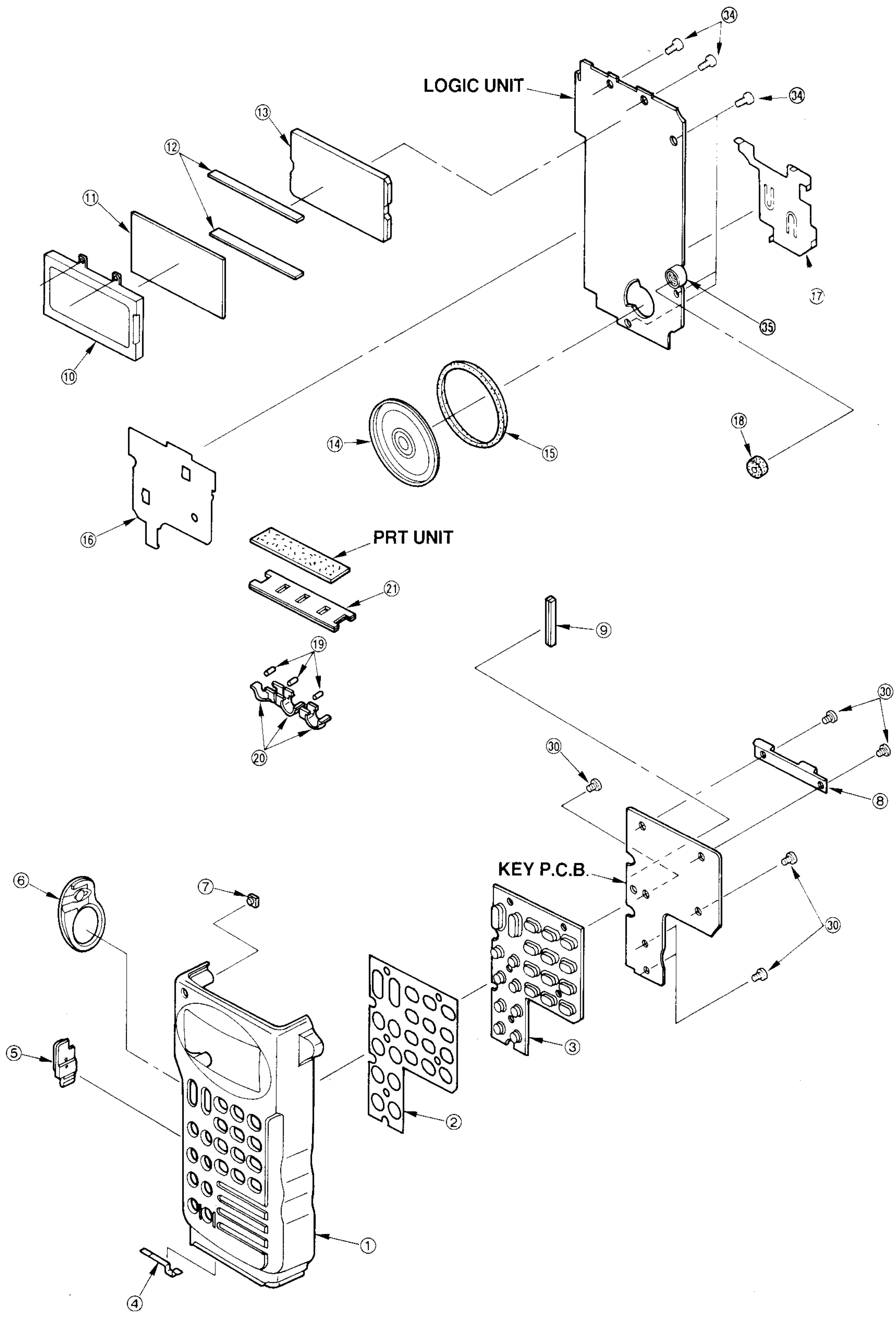
4-5 TRANSMITTER ADJUSTMENT (2)

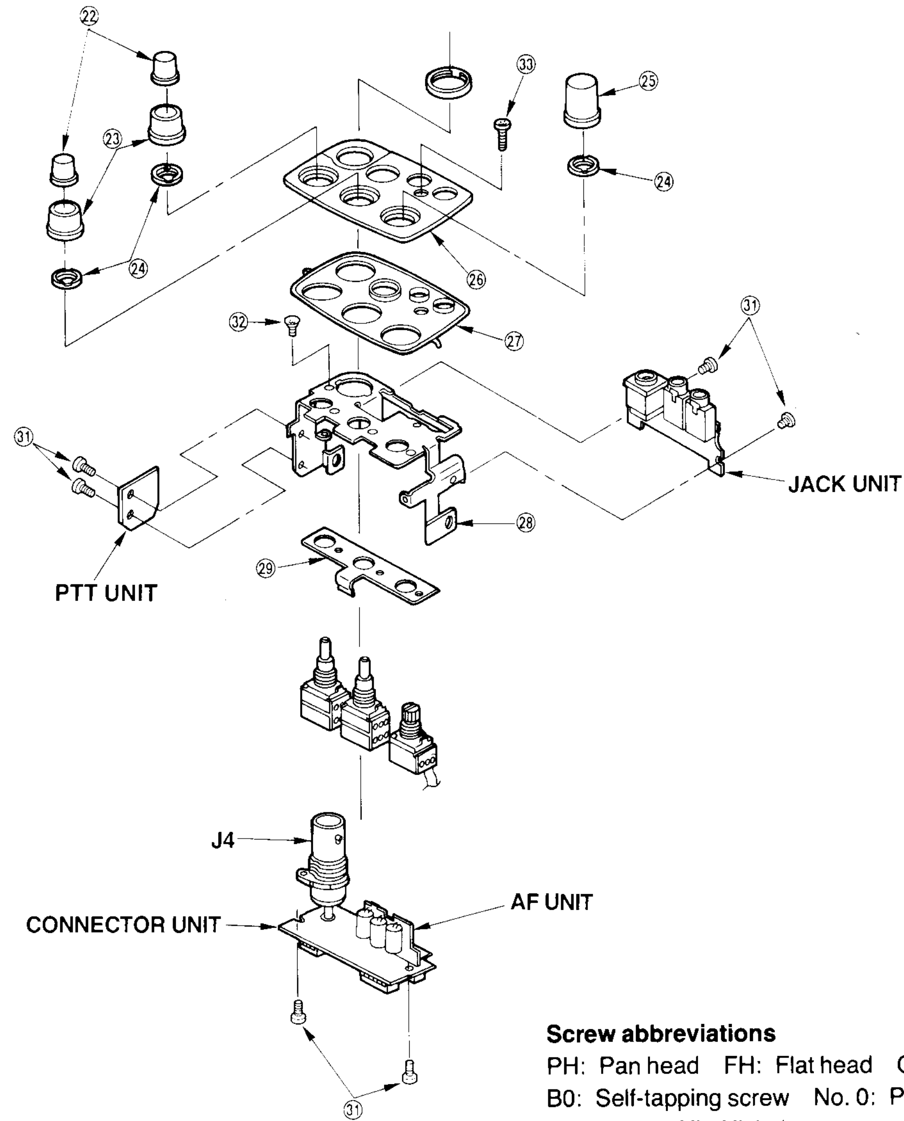
ADJUSTMENT		ADJUSTMENT CONDITIONS	MEASUREMENT		VALUE	ADJUSTMENT POINT	
			UNIT	LOCATION		UNIT	ADJUST
DTMF DEVIATION	1	•Displayed frequency: 445.000 MHz (USA) 435.000 MHz (All other versions) •Push and hold the [D] key while transmitting.	Top panel	Connect the FM deviation meter to the antenna connector through the attenuator.	3.5 kHz	LOGIC	R4
TONE CALL DEVIATION	1	•Displayed frequency: 435.000 MHz (EUR-1, UK, EUR-2) •Push and hold [VHF] key while transmitting.	Top panel	Connect the FM deviation meter to the antenna connector through the attenuator.	3.5 kHz	LOGIC	R128
TONE SQL DEVIATION	1	•Displayed frequency: 445.000 MHz (USA) •TONE frequency : 88.5 Hz •Transmitting	Top panel	Connect the FM deviation meter to the antenna connector through the attenuator.	0.75 kHz	UT-63	R13 (Refer to 8–1)

■ **LOGIC UNIT**



5-1 FRONT PARTS

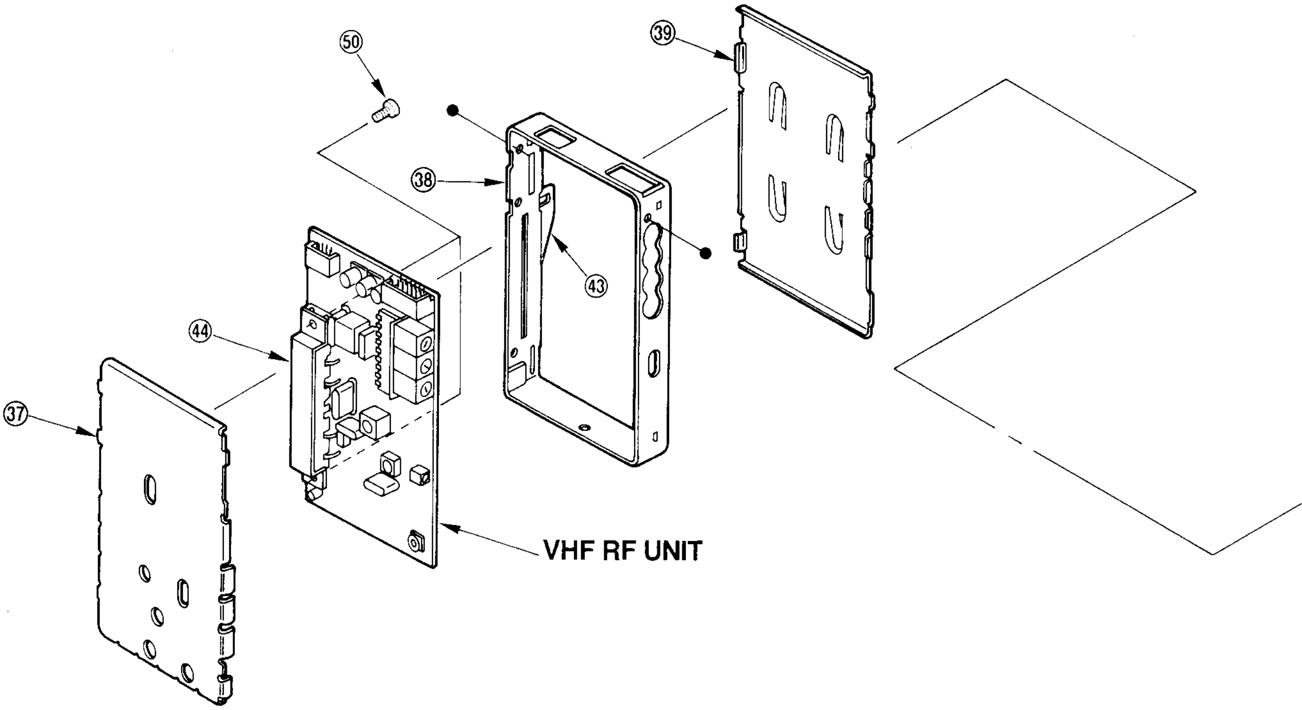




Screw abbreviations
PH: Pan head FH: Flat head OH: Oval countersunk head
B0: Self-tapping screw No. 0: Precision-type screw
ZK: Black Ni: Nickel

LABEL NUMBER	ORDER NO.	DESCRIPTION	QTY.	LABEL NUMBER	ORDER NO.	DESCRIPTION	QTY.
1	8210006110	Front panel (B) (EUR-1, 2, UK)	1	18	8930021570	873 Microphone holder	1
	8210006100	Front panel (A) (USA, AUS, SEA)	1	19	8930016560	Terminal rubber	3
2	8510006880	873 key shield	1	20	8930014852	752 battery terminal-2	3
3	8010010700	873 key board	1	21	8930014971	752 terminal holder-1	1
4	8930020240	873 spring	1	22	8610006780	Knob N161	2
5	8930019850	873 release button	1	23	8610006790	Knob N162	2
6	8930019861	873 PTT rubber (1)	1	24	8830000570	643 nut (A)	3
7	8930019780	LED lens	1	25	8610006800	Knob N163	1
8	8510006960	873 shield	1	26	8210006060	873 top panel	1
9	8930020160	Contact strip SRCN-873	1	27	8930019871	873 top seal-1	1
10	8930019930	873 LCD holder	1	28	8010010760	873 top plate	1
11	5030000630	LCD LD-BU 5192J	1	29	8510006910	LOGIC shield	1
12	8930020150	LCD contact strip SRCN-873-W	2	30	8810001700	PH No. 0 M1.4×3	6
13	8010010690	873 LCD reflector	1	31	8810004870	PH No. 0 M2×2.5	6
14	2510000530	Speaker TO28S14I0810	1	32	8810005580	FH No. 0 M2×2.5	1
15	8930018080	873-SP ring	1	33	8810005360	PH No. 0 M2×3 ZK	1
16	8930020140	CPU shield	1	34	8810001720	PH No. 0 M1.4×4	6
17	8510006920	LOGIC-A shield	1	35	7700000861	WM-62A 103	1

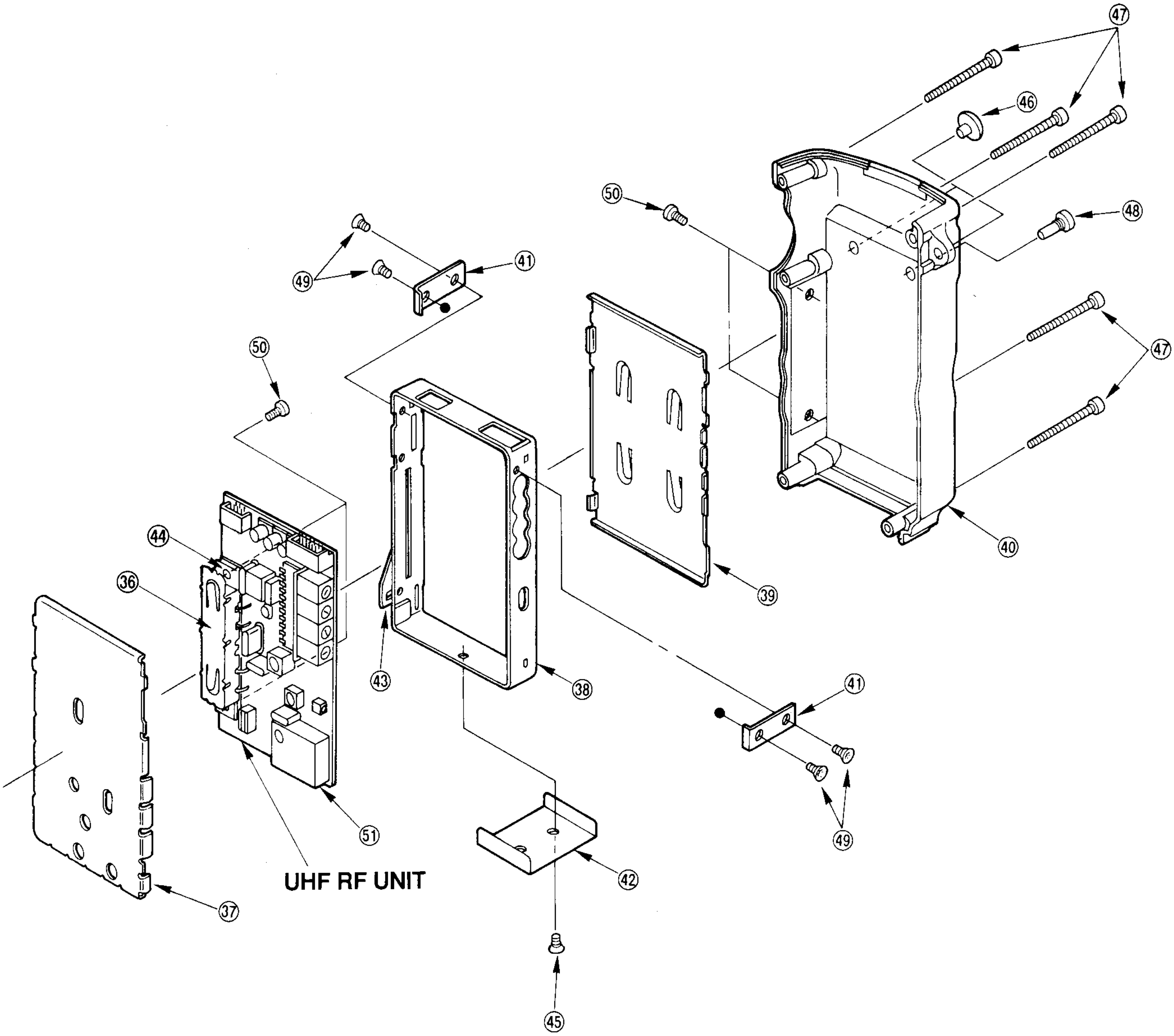
5-2 CHASSIS PARTS



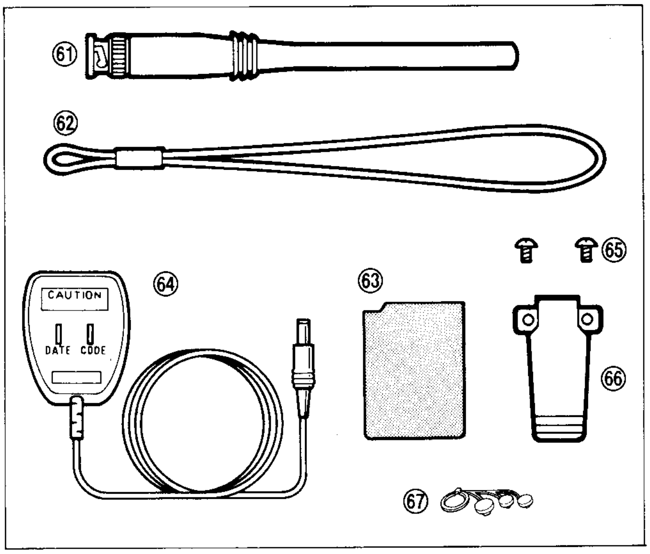
Screw abbreviations

PH: Pan head FH: Flat head OH: Oval countersunk head
B0: Self-tapping screw No. 0: Precision-type screw
ZK: Black Ni: Nickel

LABEL NUMBER	ORDER NO.	DESCRIPTION	QTY.	LABEL NUMBER	ORDER NO.	DESCRIPTION	QTY.
36	8510005050	VCO shield plate	1	44	8930019950	M holder	2
37	8510006890	873 top shield	2	45	8810005580	FH No. 0 M2×2.5	1
38	8510006860	873 unit case	2	46	8010007602	Hole bushing (A)×2	2
39	8510006870	873 bottom shield	2	47	8810006490	PH B0 M2×25ZK	5
40	8010010720	873 rear panel	1	48	8820000620	873 screw	1
41	8930019960	Unit plate	2	49	8810005580	FH No. 0 M2×2.5	4
42	8930020340	873 under plate	1	50	8810000530	PH No. 0 M2×5ZK	6
43	8930019940	M plate	2	51	8510005940	752 VCO case	1



5-3 ACCESSORIES



LABEL NUMBER	ORDER NO.	DESCRIPTION	QTY.
61	Optional product	FA-1443BB	1
62	8010008970	Strap belt HK-002	1
63	Optional product	BP-82 (AUS)	1
		BP-83 (EUR-1, UK, EUR-2)	1
		BP-84 (USA)	1
		BP-90 (SEA)	1
64	Optional product	BC-77A (USA)	1
		BC-77D (EUR-1)	1
		BC-77E (UK, EUR-2)	1
		BC-77V (AUS)	1
65	8810005730	Screw OH M3×3 ZK	2
66	8010008620	752 belt clip	1
67	8930020211	873 connector seal	1

SECTION 6 PARTS LIST

[VHF RF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC1	1110002200	IC	MC3372MR
IC3	1130000830	IC	μPD4094BG-T1
IC5	1130003760	IC	TC4S81F (TE85R)
IC6	1130003760	IC	TC4S81F (TE85R)
IC7	1130003760	IC	TC4S81F (TE85R)
IC8	1130005700	IC	M56760FP
IC9	1110002490	IC	M5218FP-73A
IC10	1180000530	IC	S-81250HG-RD-T1
IC11	1150000960	IC	SC1142
Q1	1530002280	Transistor	2SC4081 T107 S
Q2	1530002280	Transistor	2SC4081 T107 S
Q4	1590000830	Transistor	FMG2 T149
Q5	1530002020	Transistor	2SC3770-3-TA
Q6	1560000550	FET	2SK882-Y (TE85R)
Q9	1530002560	Transistor	2SC4403-3-TR
Q10	1530002560	Transistor	2SC4403-3-TR
Q11	1530002560	Transistor	2SC4403-3-TR
Q13	1590000650	Transistor	DTA144TU T107
Q14	1590000430	Transistor	DTC144EU T107
Q15	1590000690	Transistor	IMD6 T108
Q16	1590000660	Transistor	DTC144TU T107
Q17	1590000910	Transistor	IMZ2 T108
Q18	1590000670	Transistor	FMW1 T148
Q19	1590000620	Transistor	FMS1 T148
Q21	1560000540	FET	2SK880-Y (TE85R)
Q22	1590001110	Transistor	IMT1 T110
Q23	1530000371	Transistor	2SC3356 R25-T2B
Q24	1530000371	Transistor	2SC3356 R25-T2B
Q25	1590000780	Transistor	IMX5 T109
Q26	1590000780	Transistor	IMX5 T109
Q27	1530002280	Transistor	2SC4081 T107 S
Q28	1510000620	Transistor	2SA1576 T107 S
Q29	1530002280	Transistor	2SC4081 T107 S
Q30	1510000620	Transistor	2SA1576 T107 S
Q31	1530002280	Transistor	2SC4081 T107 S
Q32	1520000200	Transistor	2SB798-T2 DK
Q33	1530002280	Transistor	2SC4081 T107 S
Q34	1520000080	Transistor	2SB909M R
Q35	1590000620	Transistor	FMS1 T148
Q36	1530002280	Transistor	2SC4081 T107 S
Q37	1520000200	Transistor	2SB798-T2 DK
Q38	1510000510	Transistor	2SA1576 T107 R
Q39	1590000430	Transistor	DTC144EU T107
Q40	1590000720	Transistor	DTA144EU T107
Q41	1530002030	Transistor	2SC3772-3-TA
Q42	1530002280	Transistor	2SC4081 T107 S
D9	1790000450	Diode	MA862 (TX)
D10	1790000530	Diode	MA333 (TW)
D11	1790000620	Diode	MA77 (TW)
D12	1750000160	Diode	DA114 T107
D13	1750000160	Diode	DA114 T107
D14	1750000160	Diode	DA114 T107
D15	1750000160	Diode	DA114 T107
D16	1790000450	Diode	MA862 (TX)
D17	1790000590	Diode	MA110 (TW)
D18	1790000660	Diode	MA728 (TW)
D19	1790000660	Diode	MA728 (TW)
D20	1160000060	Diode	DAN202U T107
D21	1750000120	Diode	DWA010-TE
D22	1720000240	Varicap	1SV172 (TE85R)
D23	1790000450	Diode	MA862 (TX)
D24	1790000590	Diode	MA110 (TW)
X1	6070000080	Discriminator	CDBM455C16
X2	6050007190	Crystal	CR-325 UM-1/T 30.39500MHZ

[VHF RF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
X3	6050007230	Crystal	CR-329 UM-1/T 12.80000MHZ
FI1	2020000550	Ceramic Filter	CFUM455E
FI2	2010001220	Filter	30M15B9 (FL-150)
L1	6150003210	Coil	LS-319
L8	6110002000	Coil	LA-226
L9	6110002070	Coil	LA-227
L10	6110002120	Coil	LA-228
L11	6110002120	Coil	LA-228
L12	6110002010	Coil	LA-224
L13	6110002070	Coil	LA-227
L14	6110002000	Coil	LA-226
L15	6200001520	Coil	MLF2012D R82K-T
L16	6130002360	Coil	LB-257
L17	6200001500	Coil	MLF2012D R12K-T
L18	6200001510	Coil	MLF2012D R10K-T
L19	6110002070	Coil	LA-227
L20	6200001520	Coil	MLF2012D R82K-T
R1	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R2	7030003640	Resistor	ERJ3GEYJ 473 V (47 kΩ)
R3	7030003340	Resistor	ERJ3GEYJ 151 V (150 Ω)
R4	7310002590	Trimmer	RV-109 (RH03 A3AJ3X0BA)222
R5	7030003530	Resistor	ERJ3GEYJ 562 V (5.6 kΩ)
R7	7030003760	Resistor	ERJ3GEYJ 474 V (470 kΩ)
R8	7030003640	Resistor	ERJ3GEYJ 473 V (47 kΩ)
R9	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R10	7030003740	Resistor	ERJ3GEYJ 334 V (330 kΩ)
R11	7030003470	Resistor	ERJ3GEYJ 182 V (1.8 kΩ)
R12	7030003760	Resistor	ERJ3GEYJ 474 V (470 kΩ)
R13	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R16	7030003840	Resistor	ERJ3GEYJ 225 V (2.2 MΩ)
R18	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R19	7030003430	Resistor	ERJ3GEYJ 821 V (820 Ω)
R20	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R21	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R22	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R23	7030003410	Resistor	ERJ3GEYJ 561 V (560 Ω)
R24	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R25	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R26	7030003480	Resistor	ERJ3GEYJ 222 V (2.2 kΩ)
R27	7030003290	Resistor	ERJ3GEYJ 560 V (56 Ω)
R40	7030003440	Resistor	ERJ3GEYJ 102 V (1 kΩ)
R41	7030003610	Resistor	ERJ3GEYJ 273 V (27 kΩ)
R42	7030003640	Resistor	ERJ3GEYJ 473 V (47 kΩ)
R43	7030003280	Resistor	ERJ3GEYJ 470 V (47 Ω)
R44	7030003280	Resistor	ERJ3GEYJ 470 V (47 Ω)
R45	7030003340	Resistor	ERJ3GEYJ 151 V (150 Ω)
R46	7030003290	Resistor	ERJ3GEYJ 560 V (56 Ω)
R47	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R48	7030003280	Resistor	ERJ3GEYJ 470 V (47 Ω)
R49	7030003290	Resistor	ERJ3GEYJ 560 V (56 Ω)
R50	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R51	7030003700	Resistor	ERJ3GEYJ 154 V (150 kΩ)
R52	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R53	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R54	7030003620	Resistor	ERJ3GEYJ 333 V (33 kΩ)
R55	7310003520	Trimmer	RV-224 (RH03 AVA15J)104
R56	7030003200	Resistor	ERJ3GEYJ 100 V (10 Ω)
R57	7030003640	Resistor	ERJ3GEYJ 473 V (47 kΩ)
R58	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R59	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R60	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R61	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R62	7030003470	Resistor	ERJ3GEYJ 182 V (1.8 kΩ)
R64	7030003200	Resistor	ERJ3GEYJ 100 V (10 Ω)

[VHF RF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R66	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R67	7030003700	Resistor	ERJ3GEYJ 154 V (150 kΩ)
R68	7030003620	Resistor	ERJ3GEYJ 333 V (33 kΩ)
R69	7030003640	Resistor	ERJ3GEYJ 473 V (47 kΩ)
R71	7030003320	Resistor	ERJ3GEYJ 101 V (100 Ω)
R72	7030003380	Resistor	ERJ3GEYJ 331 V (330 Ω)
R73	7030003460	Resistor	ERJ3GEYJ 152 V (1.5 kΩ)
R74	7030003320	Resistor	ERJ3GEYJ 101 V (100 Ω)
R75	7030003320	Resistor	ERJ3GEYJ 101 V (100 Ω)
R76	7030003360	Resistor	ERJ3GEYJ 221 V (220 Ω)
R77	7030003550	Resistor	ERJ3GEYJ 822 V (8.2 kΩ)
R78	7030003550	Resistor	ERJ3GEYJ 822 V (8.2 kΩ)
R79	7030003360	Resistor	ERJ3GEYJ 221 V (220 Ω)
R80	7030003570	Resistor	ERJ3GEYJ 123 V (12 kΩ)
R82	7030003640	Resistor	ERJ3GEYJ 473 V (47 kΩ)
R83	7030003380	Resistor	ERJ3GEYJ 331 V (330 Ω)
R84	7030003570	Resistor	ERJ3GEYJ 123 V (12 kΩ)
R85	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R86	7030003290	Resistor	ERJ3GEYJ 560 V (56 Ω)
R87	7030003320	Resistor	ERJ3GEYJ 101 V (100 Ω)
R88	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R89	7030003880	Resistor	ERJ3GEYJ 244 V (240 kΩ)
R90	7030003370	Resistor	ERJ3GEYJ 271 V (270 Ω)
R91	7030003710	Resistor	ERJ3GEYJ 184 V (180 kΩ)
R92	7030003440	Resistor	ERJ3GEYJ 102 V (1 kΩ)
R93	7030003660	Resistor	ERJ3GEYJ 683 V (68 kΩ) (EUR-2,AUS,SEA,EUR-1,UK)
	7030003620	Resistor	ERJ3GEYJ 333 V (33 kΩ) (USA)
R94	7030003670	Resistor	ERJ3GEYJ 823 V (82 kΩ)
R95	7030003740	Resistor	ERJ3GEYJ 334 V (330 kΩ)
R96	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R97	7030003760	Resistor	ERJ3GEYJ 474 V (470 kΩ)
R98	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R99	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R100	7510000180	Thermistor	DTN-T203S223LS (T)
R101	7030003570	Resistor	ERJ3GEYJ 123 V (12 kΩ)
R102	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R103	7030003540	Resistor	ERJ3GEYJ 682 V (6.8 kΩ)
R104	7310002600	Trimmer	RV-110 (RH03 A3AS4X0AA)473
R105	7030003640	Resistor	ERJ3GEYJ 473 V (47 kΩ)
R106	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R107	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R108	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R109	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R110	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R111	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R112	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R113	7030003480	Resistor	ERJ3GEYJ 222 V (2.2 kΩ)
R114	7030003260	Resistor	ERJ3GEYJ 330 V (33 Ω)
R115	7030003620	Resistor	ERJ3GEYJ 333 V (33 kΩ)
R116	7030003320	Resistor	ERJ3GEYJ 101 V (100 Ω)
R117	7030003350	Resistor	ERJ3GEYJ 181 V (180 Ω)
R118	7030003380	Resistor	ERJ3GEYJ 331 V (330 Ω)
R119	7030003490	Resistor	ERJ3GEYJ 272 V (2.7 kΩ)
R120	7030003550	Resistor	ERJ3GEYJ 822 V (8.2 kΩ)
R121	7030003480	Resistor	ERJ3GEYJ 222 V (2.2 kΩ)
R122	7030003380	Resistor	ERJ3GEYJ 331 V (330 Ω)
R123	7030003340	Resistor	ERJ3GEYJ 151 V (150 Ω)
R124	7510000200	Thermistor	DTN-T203U473LS (T)
R125	7030003440	Resistor	ERJ3GEYJ 102 V (1 kΩ)
R126	7030003570	Resistor	ERJ3GEYJ 123 V (12 kΩ)
R127	7030003670	Resistor	ERJ3GEYJ 823 V (82 kΩ)
R128	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R129	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R130	7030003770	Resistor	ERJ3GEYJ 564 V (560 kΩ)
R131	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R132	7030000440	Resistor	MCR10EZHJ 3.3 kΩ (332)
R133	7030003320	Resistor	ERJ3GEYJ 101 V (100 Ω)
R134	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R135	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R136	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R137	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R138	7030003530	Resistor	ERJ3GEYJ 562 V (5.6 kΩ)
R139	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R140	7030003200	Resistor	ERJ3GEYJ 100 V (10 Ω)
R141	7030003750	Resistor	ERJ3GEYJ 394 V (390 kΩ)

[VHF RF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R142	7030003710	Resistor	ERJ3GEYJ 184 V (180 kΩ)
C1	4030004060	Ceramic	GRM39 SL 270J 50PT
C2	4030008790	Ceramic	GRM39 F 104Z 25PT
C3	4030008790	Ceramic	GRM39 F 104Z 25PT
C4	4030008790	Ceramic	GRM39 F 104Z 25PT
C5	4030008790	Ceramic	GRM39 F 104Z 25PT
C6	4030004110	Ceramic	GRM39 SL 560J 50PT
C7	4030003880	Ceramic	GRM39 SL 160J 50PT
C9	4030008790	Ceramic	GRM39 F 104Z 25PT
C10	4030004240	Ceramic	GRM39 B 102K 50PT
C11	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C13	4030004100	Ceramic	GRM39 SL 470J 50PT
C14	4030004100	Ceramic	GRM39 SL 470J 50PT
C15	4030004310	Ceramic	GRM39 B 103K 25PT
C16	4030004240	Ceramic	GRM39 B 102K 50PT
C17	4030004310	Ceramic	GRM39 B 103K 25PT
C18	4030004310	Ceramic	GRM39 B 103K 25PT
C19	4550003000	Tantalum	TEMSVB 0G 226M-12 L
C20	4030003890	Ceramic	GRM39 B 471K 50PT
C21	4030004030	Ceramic	GRM39 SL 120J 50PT
C22	4030004240	Ceramic	GRM39 B 102K 50PT
C23	4030004050	Ceramic	GRM39 SL 220J 50PT
C24	4030004240	Ceramic	GRM39 B 102K 50PT
C25	4030004240	Ceramic	GRM39 B 102K 50PT
C26	4030004100	Ceramic	GRM39 SL 470J 50PT
C44	4030003890	Ceramic	GRM39 B 471K 50PT
C45	4030003930	Ceramic	GRM39 SL 0R5C 50PT
C46	4030004040	Ceramic	GRM39 SL 150J 50PT
C49	4030003890	Ceramic	GRM39 B 471K 50PT
C50	4030004040	Ceramic	GRM39 SL 150J 50PT
C51	4030003890	Ceramic	GRM39 B 471K 50PT
C52	4030003880	Ceramic	GRM39 SL 180J 50PT
C53	4030004070	Ceramic	GRM39 SL 330J 50PT
C54	4030004050	Ceramic	GRM39 SL 220J 50PT
C55	4030004240	Ceramic	GRM39 B 102K 50PT
C56	4030003880	Ceramic	GRM39 SL 180J 50PT
C57	4030003960	Ceramic	GRM39 SL 030C 50PT
C58	4030004060	Ceramic	GRM39 SL 270J 50PT
C59	4030003990	Ceramic	GRM39 SL 060D 50PT
C60	4030004050	Ceramic	GRM39 SL 220J 50PT
C61	4030004000	Ceramic	GRM39 SL 070D 50PT
C62	4030003970	Ceramic	GRM39 SL 040C 50PT
C63	4030004000	Ceramic	GRM39 SL 070D 50PT
C64	4030004100	Ceramic	GRM39 SL 470J 50PT
C65	4030004000	Ceramic	GRM39 SL 070D 50PT
C66	4030004240	Ceramic	GRM39 B 102K 50PT
C67	4030008790	Ceramic	GRM39 F 104Z 25PT
C68	4030008810	Ceramic	GRM39 CH 150J 50PT
C69	4610001260	Trimmer	ECRJA020E12W
C70	4030008820	Ceramic	GRM39 CH 390J 50PT
C71	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C72	4030004240	Ceramic	GRM39 B 102K 50PT
C73	4030004240	Ceramic	GRM39 B 102K 50PT
C74	4030004240	Ceramic	GRM39 B 102K 50PT
C76	4030008790	Ceramic	GRM39 F 104Z 25PT
C77	4550002950	Tantalum	TESVA 0J 335M1-8L
C78	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C79	4550000460	Tantalum	TESVA 1C 105M1-8L
C80	4030004240	Ceramic	GRM39 B 102K 50PT
C81	4030004240	Ceramic	GRM39 B 102K 50PT
C82	4030004070	Ceramic	GRM39 SL 330J 50PT
C83	4030004240	Ceramic	GRM39 B 102K 50PT
C84	4030004240	Ceramic	GRM39 B 102K 50PT
C85	4030004240	Ceramic	GRM39 B 102K 50PT
C86	4030004240	Ceramic	GRM39 B 102K 50PT
C87	4030004240	Ceramic	GRM39 B 102K 50PT
C88	4030003940	Ceramic	GRM39 SL 010C 50PT
C89	4030003940	Ceramic	GRM39 SL 010C 50PT
C90	4030004240	Ceramic	GRM39 B 102K 50PT
C91	4030003930	Ceramic	GRM39 SL 0R5C 50PT
C92	4030004240	Ceramic	GRM39 B 102K 50PT
C93	4030004050	Ceramic	GRM39 SL 220J 50PT
C94	4030004240	Ceramic	GRM39 B 102K 50PT
C95	4030004240	Ceramic	GRM39 B 102K 50PT
C97	4030004240	Ceramic	GRM39 B 102K 50PT
C99	4030004240	Ceramic	GRM39 B 102K 50PT

[VHF RF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C100	4030003890	Ceramic	GRM39 B 471K 50PT
C101	4030004280	Ceramic	GRM39 B 472K 50PT
C102	4550003030	Tantalum	TEMSVA 0J 475M-8L
C103	4030003890	Ceramic	GRM39 B 471K 50PT
C104	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C105	4030003890	Ceramic	GRM39 B 471K 50PT
C106	4030003890	Ceramic	GRM39 B 471K 50PT
C107	4030004260	Ceramic	GRM39 B 272K 50PT
C108	4030004180	Ceramic	GRM39 SL 121J 50PT
C109	4030004310	Ceramic	GRM39 B 103K 25PT
C110	4030004310	Ceramic	GRM39 B 103K 25PT
C111	4030004240	Ceramic	GRM39 B 102K 50PT
C112	4030004310	Ceramic	GRM39 B 103K 25PT
C113	4510004430	Electrolytic	ECEV1CV220WR
C114	4030003890	Ceramic	GRM39 B 471K 50PT
C116	4510004420	Electrolytic	ECEV0JV330SR
C117	4030003890	Ceramic	GRM39 B 471K 50PT
C118	4550003030	Tantalum	TEMSVA 0J 475M-8L
C119	4030003890	Ceramic	GRM39 B 471K 50PT
C120	4030003890	Ceramic	GRM39 B 471K 50PT
C121	4550003030	Tantalum	TEMSVA 0J 475M-8L
C122	4030003890	Ceramic	GRM39 B 471K 50PT
C123	4550002890	Tantalum	TESVA 1A 225M1-8L
C124	4030003890	Ceramic	GRM39 B 471K 50PT
C125	4550002890	Tantalum	TESVA 1A 225M1-8L
C126	4030003890	Ceramic	GRM39 B 471K 50PT
C127	4550003040	Tantalum	TEMSVB2 0J 106M-8 L
C128	4030003890	Ceramic	GRM39 B 471K 50PT
C129	4030004240	Ceramic	GRM39 B 102K 50PT
C130	4030004240	Ceramic	GRM39 B 102K 50PT
C131	4030004240	Ceramic	GRM39 B 102K 50PT
C132	4030004030	Ceramic	GRM39 SL 120J 50PT
C133	4510004430	Electrolytic	ECEV1CV220WR
C134	4030004240	Ceramic	GRM39 B 102K 50PT
C136	4030004240	Ceramic	GRM39 B 102K 50PT
C137	4030004180	Ceramic	GRM39 SL 121J 50PT
C138	4030004050	Ceramic	GRM39 SL 220J 50PT
C139	4030004050	Ceramic	GRM39 SL 220J 50PT
C140	4030004240	Ceramic	GRM39 B 102K 50PT
C141	4030004240	Ceramic	GRM39 B 102K 50PT
C142	4030004240	Ceramic	GRM39 B 102K 50PT
C143	4030008790	Ceramic	GRM39 F 104Z 25PT
C144	4030003890	Ceramic	GRM39 B 471K 50PT
C145	4030003890	Ceramic	GRM39 B 471K 50PT
C146	4030003890	Ceramic	GRM39 B 471K 50PT
C147	4030003890	Ceramic	GRM39 B 471K 50PT
C148	4550003030	Tantalum	TEMSVA 0J 475M-8L
C149	4030003890	Ceramic	GRM39 B 471K 50PT
C150	4030003890	Ceramic	GRM39 B 471K 50PT
C151	4030004240	Ceramic	GRM39 B 102K 50PT
C152	4030003890	Ceramic	GRM39 B 471K 50PT
C154	4030004310	Ceramic	GRM39 B 103K 25PT
C156	4510001350	Electrolytic	16 MS5 10 μF
C158	4030004240	Ceramic	GRM39 B 102K 50PT
C159	4030004050	Ceramic	GRM39 SL 220J 50PT
C160	4030004020	Ceramic	GRM39 SL 100D 50PT
C161	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C162	4030003890	Ceramic	GRM39 B 471K 50PT
EP1	0910028404	P.C. Board	B 2742D (VHF RF)

[V RFA UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
Q1	1530002570	Transistor	2SC4405-3-TR
Q2	1530002560	Transistor	2SC4403-3-TR
D1	1790000620	Diode	MA77 (TW)
D2	1790000640	Diode	MA363B (TX)
D3	1790000620	Diode	MA77 (TW)

[V RFA UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
D4	1790000640	Diode	MA363B (TX)
D5	1790000640	Diode	MA363B (TX)
D6	1790000620	Diode	MA77 (TW)
R1	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R2	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R3	7030003240	Resistor	ERJ3GEYJ 220 V (22 Ω)
R4	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R5	7030003280	Resistor	ERJ3GEYJ 470 V (47 Ω)
R6	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R7	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R8	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R9	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R10	7030003580	Resistor	ERJ3GEYJ 153 V (15 kΩ)
R11	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R14	7030003330	Resistor	ERJ3GEYJ 121 V (120 Ω)
C1	4030003880	Ceramic	GRM39 SL 180J 50PT
C2	4030004070	Ceramic	GRM39 SL 330J 50PT
C3	4030004000	Ceramic	GRM39 SL 070D 50PT
C4	4030004030	Ceramic	GRM39 SL 120J 50PT
C5	4030003890	Ceramic	GRM39 B 471K 50PT
C6	4030004000	Ceramic	GRM39 SL 070D 50PT
C7	4030004110	Ceramic	GRM39 SL 560J 50PT
C8	4030003940	Ceramic	GRM39 SL 010C 50PT
C9	4030004000	Ceramic	GRM39 SL 070D 50PT
C10	4030004240	Ceramic	GRM39 B 102K 50PT
C11	4030004110	Ceramic	GRM39 SL 560J 50PT
C12	4030004000	Ceramic	GRM39 SL 070D 50PT
C13	4030004240	Ceramic	GRM39 B 102K 50PT
C18	4030004240	Ceramic	GRM39 B 102K 50PT
C20	4030004240	Ceramic	GRM39 B 102K 50PT
C21	4030004240	Ceramic	GRM39 B 102K 50PT
C22	4030004240	Ceramic	GRM39 B 102K 50PT
EP1	0910029571	P.C. Board	B 3003A (V RFA)

[V RFB UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
L1	6150003120	Coil	LS-321
L2	6150003120	Coil	LS-321
L3	6150003430	Coil	LS-378
EP1	0910020185	P.C. Board	B 1946E (V RFB)

[UHF RF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC1	1110002200	IC	MC3372MR
IC3	1110001971	IC	μPC1676G-T1
IC4	1130000830	IC	μPD4094BG-T1
IC6	1130005700	IC	M56760FP
IC7	1110001971	IC	μPC1676G-T1
IC8	1110002490	IC	M5218FP-73A
IC10	1180000530	IC	S-81250HG-RD-T1
IC11	1150000970	IC	M67749M / SC1143
IC12	1130003760	IC	TC4S81F (TE85R)
IC13	1130003760	IC	TC4S81F (TE85R)
IC14	1130003760	IC	TC4S81F (TE85R)
Q1	1530002020	Transistor	2SC3770-3-TA
Q2	1530002560	Transistor	2SC4403-3-TR
Q3	1590000720	Transistor	DTA144EU T107

[UHF RF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
Q6	1530002640	Transistor	2SC3583 R34-T2B
Q7	1590000970	Transistor	FMA2 T148
Q8	1510000510	Transistor	2SA1576 T107 R
Q9	1590000430	Transistor	DTC144EU T107
Q10	1590000720	Transistor	DTA144EU T107
Q11	1590000660	Transistor	DTC144TU T107
Q12	1590000910	Transistor	IMZ2 T108
Q13	1590001160	Transistor	XP1401-(TX).AB
Q14	1590000430	Transistor	DTC144EU T107
Q15	1530002560	Transistor	2SC4403-3-TR
Q16	1530002280	Transistor	2SC4081 T107 S
Q17	1510000620	Transistor	2SA1576 T107 S
Q18	1530002280	Transistor	2SC4081 T107 S
Q19	1510000620	Transistor	2SA1576 T107 S
Q20	1530002280	Transistor	2SC4081 T107 S
Q21	1520000200	Transistor	2SB798-T2 DK
Q22	1530002280	Transistor	2SC4081 T107 S
Q23	1520000080	Transistor	2SB809M R
Q24	1590001160	Transistor	XP1401-(TX).AB
Q25	1530002280	Transistor	2SC4081 T107 S
Q26	1510000620	Transistor	2SA1576 T107 S
Q27	1530000371	Transistor	2SC3356 R25-T2B
Q28	1530002560	Transistor	2SC4403-3-TR
Q29	1590000440	Transistor	DTA143ZU T107
Q30	1590000430	Transistor	DTC144EU T107
Q31	1590001170	Transistor	XP1501-(TX).AB
Q32	1590000430	Transistor	DTC144EU T107
Q33	1530002560	Transistor	2SC4403-3-TR
Q34	1530002560	Transistor	2SC4403-3-TR
D2	1790000450	Diode	MA862 (TX)
D3	1790000450	Diode	MA862 (TX)
D4	1790000620	Diode	MA77 (TW)
D6	1790000450	Diode	MA862 (TX)
D7	1790000450	Diode	MA862 (TX)
D9	1790000450	Diode	MA862 (TX)
D10	1750000130	Diode	DA204U T107
D11	1790000590	Diode	MA110 (TW)
D12	1750000160	Diode	DA114 T107
D13	1750000160	Diode	DA114 T107
D14	1790000590	Diode	MA110 (TW)
D15	1160000060	Diode	DAN202U T107
D16	1790000660	Diode	MA728 (TW)
D17	1790000590	Diode	MA110 (TW)
D18	1790000660	Diode	MA728 (TW)
D19	1790000450	Diode	MA862 (TX)
D20	1790000620	Diode	MA77 (TW)
D21	1790000620	Diode	MA77 (TW)
D22	1790000620	Diode	MA77 (TW)
X1	6070000080	Discriminator	CDBM455C16
X2	6050007220	Crystal	CR-328 UM-1/T 35.34510MHZ
X3	6050007230	Crystal	CR-329 UM-1/T 12.80000MHZ
FI1	2020000550	Ceramic Filter	CFUM455E
FI2	2010001230	Filter	35M15B 35.8000M (FL-152)
L1	6150003210	Coil	LS-319
L5	6200000720	Coil	LQN 2A 10NM
L7	6200000720	Coil	LQN 2A 10NM
L8	6200000100	Coil	LQN 2A 22NM
L9	6110001990	Coil	LA-223
L10	6110001990	Coil	LA-223
L11	6110001990	Coil	LA-223
L12	6110001990	Coil	LA-223
L13	6110001990	Coil	LA-223
L14	6110001990	Coil	LA-223
L15	6110001990	Coil	LA-223
L16	6200000100	Coil	LQN 2A 22NM
L18	6200001520	Coil	MLF2012D R82K-T
L19	6200001060	Coil	MLF2012D 47NM-T
L20	6110001990	Coil	LA-223

[UHF RF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
L21	6200000090	Coil	LQN 2A 18NM
R1	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R2	7030003200	Resistor	ERJ3GEYJ 100 V (10 Ω)
R3	7030003640	Resistor	ERJ3GEYJ 473 V (47 kΩ)
R4	7310002590	Trimmer	RV-109 (RH03 A3AJ3X0BA)222
R5	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R6	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R7	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R8	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R9	7030003460	Resistor	ERJ3GEYJ 152 V (1.5 kΩ)
R10	7030003430	Resistor	ERJ3GEYJ 821 V (820 Ω)
R11	7030003670	Resistor	ERJ3GEYJ 823 V (82 kΩ)
R12	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R13	7030003410	Resistor	ERJ3GEYJ 561 V (560 Ω)
R14	7030003440	Resistor	ERJ3GEYJ 102 V (1 kΩ)
R15	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R16	7030003700	Resistor	ERJ3GEYJ 154 V (150 kΩ)
R17	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R18	7030003660	Resistor	ERJ3GEYJ 683 V (68 kΩ)
R19	7030003200	Resistor	ERJ3GEYJ 100 V (10 Ω)
R27	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R28	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R29	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R30	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R31	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R32	7030003300	Resistor	ERJ3GEYJ 680 V (68 Ω)
R33	7030003440	Resistor	ERJ3GEYJ 102 V (1 kΩ)
R34	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R35	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R37	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R38	7030003700	Resistor	ERJ3GEYJ 154 V (150 kΩ)
R39	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R40	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R41	7030003620	Resistor	ERJ3GEYJ 333 V (33 kΩ)
R42	7310003520	Trimmer	RV-224 (RH03 AVA15J)104
R44	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R45	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R46	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R47	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R48	7030003500	Resistor	ERJ3GEYJ 332 V (3.3 kΩ)
R49	7030003460	Resistor	ERJ3GEYJ 152 V (1.5 kΩ)
R50	7030003460	Resistor	ERJ3GEYJ 152 V (1.5 kΩ)
R51	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R52	7030003440	Resistor	ERJ3GEYJ 102 V (1 kΩ)
R53	7030003650	Resistor	ERJ3GEYJ 563 V (56 kΩ)
R54	7030003320	Resistor	ERJ3GEYJ 101 V (100 Ω)
R55	7030003380	Resistor	ERJ3GEYJ 331 V (330 Ω)
R56	7030003290	Resistor	ERJ3GEYJ 560 V (56 Ω)
R57	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R58	7030003440	Resistor	ERJ3GEYJ 102 V (1 kΩ)
R59	7030003710	Resistor	ERJ3GEYJ 184 V (180 kΩ)
R60	7030003880	Resistor	ERJ3GEYJ 244 V (240 kΩ)
R61	7030003370	Resistor	ERJ3GEYJ 271 V (270 Ω)
R62	7030003660	Resistor	ERJ3GEYJ 683 V (68 kΩ) (EUR-1,UK,EUR-2,AUS,SEA)
	7030003620	Resistor	ERJ3GEYJ 333 V (33 kΩ) (USA)
R63	7030003670	Resistor	ERJ3GEYJ 823 V (82 kΩ)
R64	7030003740	Resistor	ERJ3GEYJ 334 V (330 kΩ)
R65	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R66	7030003760	Resistor	ERJ3GEYJ 474 V (470 kΩ)
R67	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R68	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R69	7030003570	Resistor	ERJ3GEYJ 123 V (12 kΩ)
R70	7510000180	Thermistor	DTN-T203S223LS (T)
R71	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R72	7030003540	Resistor	ERJ3GEYJ 682 V (6.8 kΩ)
R73	7310002600	Trimmer	RV-110 (RH03 A3AS4X0AA)473
R74	7030003640	Resistor	ERJ3GEYJ 473 V (47 kΩ)
R75	7030003660	Resistor	ERJ3GEYJ 683 V (68 kΩ)
R76	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R77	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R78	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R79	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)

[UHF RF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R80	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R81	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R82	7030003280	Resistor	ERJ3GEYJ 470 V (47 Ω)
R83	7030003240	Resistor	ERJ3GEYJ 220 V (22 Ω)
R84	7030003230	Resistor	ERJ3GEYJ 180 V (18 Ω)
R85	7030003210	Resistor	ERJ3GEYJ 120 V (12 Ω)
R86	7030003340	Resistor	ERJ3GEYJ 151 V (150 Ω)
R87	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R88	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R89	7030003480	Resistor	ERJ3GEYJ 222 V (2.2 kΩ)
R90	7030003480	Resistor	ERJ3GEYJ 222 V (2.2 kΩ)
R91	7030003550	Resistor	ERJ3GEYJ 822 V (8.2 kΩ)
R92	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R93	7030003340	Resistor	ERJ3GEYJ 151 V (150 Ω)
R94	7510000200	Thermistor	DTN-T203U473LS (T)
R95	7030003570	Resistor	ERJ3GEYJ 123 V (12 kΩ)
R96	7030003440	Resistor	ERJ3GEYJ 102 V (1 kΩ)
R97	7030003670	Resistor	ERJ3GEYJ 823 V (82 kΩ)
R98	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R99	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R100	7030003770	Resistor	ERJ3GEYJ 564 V (560 kΩ)
R101	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R102	7030000440	Resistor	MCR10EZHJ 3.3 kΩ (332)
R103	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R104	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R106	7510000430	Thermistor	DTN-T203K202LS (T)
R107	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R108	7030003650	Resistor	ERJ3GEYJ 563 V (56 kΩ)
R109	7030003660	Resistor	ERJ3GEYJ 683 V (68 kΩ)
R110	7030003650	Resistor	ERJ3GEYJ 563 V (56 kΩ)
R111	7030003410	Resistor	ERJ3GEYJ 561 V (560 Ω)
R112	7030003410	Resistor	ERJ3GEYJ 561 V (560 Ω)
R113	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
C1	4030004240	Ceramic	GRM39 B 102K 50PT
C2	4030008790	Ceramic	GRM39 F 104Z 25PT
C3	4030004060	Ceramic	GRM39 SL 270J 50PT
C4	4030008790	Ceramic	GRM39 F 104Z 25PT
C6	4030008790	Ceramic	GRM39 F 104Z 25PT
C7	4030003880	Ceramic	GRM39 SL 180J 50PT
C8	4030004100	Ceramic	GRM39 SL 470J 50PT
C9	4030004240	Ceramic	GRM39 B 102K 50PT
C10	4030008790	Ceramic	GRM39 F 104Z 25PT
C11	4030008790	Ceramic	GRM39 F 104Z 25PT
C12	4030004240	Ceramic	GRM39 B 102K 50PT
C13	4030004310	Ceramic	GRM39 B 103K 25PT
C14	4030004040	Ceramic	GRM39 SL 150J 50PT
C15	4030004240	Ceramic	GRM39 B 102K 50PT
C16	4030004050	Ceramic	GRM39 SL 220J 50PT
C18	4030003930	Ceramic	GRM39 SL 0R5C 50PT
C19	4030003990	Ceramic	GRM39 SL 060D 50PT
C26	4030004240	Ceramic	GRM39 B 102K 50PT
C27	4030004240	Ceramic	GRM39 B 102K 50PT
C29	4030003940	Ceramic	GRM39 SL 010C 50PT
C30	4030008800	Ceramic	GRM39 SL 090D 50PT
C31	4030003950	Ceramic	GRM39 SL 020C 50PT
C32	4030003980	Ceramic	GRM39 SL 050C 50PT
C33	4030004240	Ceramic	GRM39 B 102K 50PT
C34	4030004240	Ceramic	GRM39 B 102K 50PT
C35	4030004310	Ceramic	GRM39 B 103K 25PT
C36	4030004240	Ceramic	GRM39 B 102K 50PT
C37	4030004240	Ceramic	GRM39 B 102K 50PT
C38	4030003890	Ceramic	GRM39 B 471K 50PT
C39	4030004240	Ceramic	GRM39 B 102K 50PT
C41	4030003980	Ceramic	GRM39 SL 050C 50PT
C42	4030004020	Ceramic	GRM39 SL 100D 50PT
C43	4030004130	Ceramic	GRM39 SL 680J 50PT
C44	4030008800	Ceramic	GRM39 SL 090D 50PT
C45	4030003980	Ceramic	GRM39 SL 050C 50PT
C46	4030003930	Ceramic	GRM39 SL 0R5C 50PT
C47	4030008800	Ceramic	GRM39 SL 090D 50PT
C48	4030003930	Ceramic	GRM39 SL 0R5C 50PT
C49	4030004000	Ceramic	GRM39 SL 070D 50PT
C50	4030003940	Ceramic	GRM39 SL 010C 50PT
C51	4030003930	Ceramic	GRM39 SL 0R5C 50PT
C52	4030008440	Ceramic	C1608 SL 1H 1R5C-T-A
C53	4030003960	Ceramic	GRM39 SL 030C 50PT

[UHF RF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C54	4030003890	Ceramic	GRM39 B 471K 50PT
C56	4030009280	Ceramic	GRM39 CH 820J 50PT
C57	4030008980	Ceramic	C2012 JB 1C 104K-T-A
C59	4030008790	Ceramic	GRM39 F 104Z 25PT
C60	4030008810	Ceramic	GRM39 CH 150J 50PT
C61	4610001260	Trimmer	ECRJA020E12W
C62	4030003890	Ceramic	GRM39 B 471K 50PT
C63	4030008790	Ceramic	GRM39 F 104Z 25PT
C64	4030004240	Ceramic	GRM39 B 102K 50PT
C65	4030004000	Ceramic	GRM39 SL 070D 50PT
C66	4030004240	Ceramic	GRM39 B 102K 50PT
C67	4030004020	Ceramic	GRM39 SL 100D 50PT
C68	4550002950	Tantalum	TESVA 0J 335M1-8L
C69	4030009000	Ceramic	C2012 JB 1C 224K-T-A
C70	4550000270	Tantalum	TESVA 1E 474M1-8L
C71	4030004240	Ceramic	GRM39 B 102K 50PT
C72	4030004240	Ceramic	GRM39 B 102K 50PT
C74	4030004240	Ceramic	GRM39 B 102K 50PT
C75	4030004310	Ceramic	GRM39 B 103K 25PT
C76	4030004240	Ceramic	GRM39 B 102K 50PT
C77	4030004280	Ceramic	GRM39 B 472K 50PT
C78	4550003030	Tantalum	TEMSVA 0J 475M-8L
C79	4030003890	Ceramic	GRM39 B 471K 50PT
C80	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C81	4030003890	Ceramic	GRM39 B 471K 50PT
C82	4030004240	Ceramic	GRM39 B 102K 50PT
C83	4030004260	Ceramic	GRM39 B 272K 50PT
C84	4030004180	Ceramic	GRM39 SL 121J 50PT
C85	4030004310	Ceramic	GRM39 B 103K 25PT
C86	4030004310	Ceramic	GRM39 B 103K 25PT
C87	4030004240	Ceramic	GRM39 B 102K 50PT
C88	4030003890	Ceramic	GRM39 B 471K 50PT
C89	4510004430	Electrolytic	ECEV1CV220WR
C90	4030003890	Ceramic	GRM39 B 471K 50PT
C91	4030003890	Ceramic	GRM39 B 471K 50PT
C93	4510004420	Electrolytic	ECEV0JV330SR
C94	4550003030	Tantalum	TEMSVA 0J 475M-8L
C95	4030003890	Ceramic	GRM39 B 471K 50PT
C96	4030004240	Ceramic	GRM39 B 102K 50PT
C97	4550000550	Tantalum	TESVA 1V 224M1-8L
C98	4030004240	Ceramic	GRM39 B 102K 50PT
C99	4550000550	Tantalum	TESVA 1V 224M1-8L
C100	4030004240	Ceramic	GRM39 B 102K 50PT
C101	4550000550	Tantalum	TESVA 1V 224M1-8L
C102	4030004240	Ceramic	GRM39 B 102K 50PT
C103	4550003040	Tantalum	TEMSVB2 0J 106M-8 L
C104	4030008790	Ceramic	GRM39 F 104Z 25PT
C105	4030003890	Ceramic	GRM39 B 471K 50PT
C106	4030003890	Ceramic	GRM39 B 471K 50PT
C108	4030003890	Ceramic	GRM39 B 471K 50PT
C109	4030003890	Ceramic	GRM39 B 471K 50PT
C110	4550003030	Tantalum	TEMSVA 0J 475M-8L
C111	4030003890	Ceramic	GRM39 B 471K 50PT
C112	4030003890	Ceramic	GRM39 B 471K 50PT
C113	4030004240	Ceramic	GRM39 B 102K 50PT
C114	4030004240	Ceramic	GRM39 B 102K 50PT
C116	4030004240	Ceramic	GRM39 B 102K 50PT
C117	4510004430	Electrolytic	ECEV1CV220WR
C118	4030004240	Ceramic	GRM39 B 102K 50PT
C119	4030003970	Ceramic	GRM39 SL 040C 50PT
C120	4030004240	Ceramic	GRM39 B 102K 50PT
C121	4030004240	Ceramic	GRM39 B 102K 50PT
C123	4030004240	Ceramic	GRM39 B 102K 50PT
C125	4030004240	Ceramic	GRM39 B 102K 50PT
C126	4030004240	Ceramic	GRM39 B 102K 50PT
C127	4030004240	Ceramic	GRM39 B 102K 50PT
C128	4030009150	Ceramic	GRM39 CH 101J 50PT
C129	4030003940	Ceramic	GRM39 SL 010C 50PT
C130	4030003940	Ceramic	GRM39 SL 010C 50PT
C131	4030004310	Ceramic	GRM39 B 103K 25PT
C132	4030004310	Ceramic	GRM39 B 103K 25PT
C133	4030008440	Ceramic	C1608 SL 1H 1R5C-T-A
C134	4030004020	Ceramic	GRM39 SL 100D 50PT
C135	4030004010	Ceramic	GRM39 SL 080D 50PT
C136	4030003980	Ceramic	GRM39 SL 050C 50PT
C137	4030004240	Ceramic	GRM39 B 102K 50PT
C138	4030004240	Ceramic	GRM39 B 102K 50PT
C139	4030004240	Ceramic	GRM39 B 102K 50PT

[UHF RF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C140	4030004240	Ceramic	GRM39 B 102K 50PT
C141	4030009170	Ceramic	GRM40 F 105Z 16PT
C142	4030004240	Ceramic	GRM39 B 102K 50PT
C143	4030004240	Ceramic	GRM39 B 102K 50PT
C144	4030004240	Ceramic	GRM39 B 102K 50PT
EP2	0910027335	P.C. Board	B 2740E (UHF RF)

[U RFA UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
Q1	1530002640	Transistor	2SC3583 R34-T2B
Q2	1530002620	Transistor	2SC3585 R44-T2B
D1	1790000620	Diode	MA77 (TW)
D2	1790000620	Diode	MA77 (TW)
L1	6200000720	Coil	LQN 2A 10NM
R1	7030003280	Resistor	ERJ3GEYJ 470 V (47 Ω)
R2	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R3	7030003280	Resistor	ERJ3GEYJ 470 V (47 Ω)
R4	7030003620	Resistor	ERJ3GEYJ 333 V (33 kΩ)
R5	7030003280	Resistor	ERJ3GEYJ 470 V (47 Ω)
R6	7030003620	Resistor	ERJ3GEYJ 333 V (33 kΩ)
R7	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R8	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
C1	4030003890	Ceramic	GRM39 B 471K 50PT
C2	4030004240	Ceramic	GRM39 B 102K 50PT
C3	4030004240	Ceramic	GRM39 B 102K 50PT
C4	4030004040	Ceramic	GRM39 SL 150J 50PT
C5	4030004240	Ceramic	GRM39 B 102K 50PT
C6	4030004240	Ceramic	GRM39 B 102K 50PT
C7	4030004240	Ceramic	GRM39 B 102K 50PT
EP1	0910028082	P.C. Board	B 2845B (U RFA)
EP2	6510008580	Lead Frame	PT2.0-0.7-16.5 (K)

[U RFB UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
L1	6190000320	Coil	5HW-F367PN-157A
L2	6190000320	Coil	5HW-F367PN-157A
EP1	0910020033	P.C. Board	B 1916C (U RFB)

[U VCO UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
Q1	1530000371	Transistor	2SC3356 R25-T2B
Q2	1530000371	Transistor	2SC3356 R25-T2B
D1	1790000530	Diode	MA333 (TW)
D2	1790000620	Diode	MA77 (TW)

[U VCO UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
L1	6200001520	Coil	MLF2012D R82K-T
L2	6110001990	Coil	LA-223
R1	7030003360	Resistor	ERJ3GEYJ 221 V (220 Ω)
R2	7030003320	Resistor	ERJ3GEYJ 101 V (100 Ω)
R3	7030003550	Resistor	ERJ3GEYJ 822 V (8.2 kΩ)
R4	7030003360	Resistor	ERJ3GEYJ 221 V (220 Ω)
R5	7030003550	Resistor	ERJ3GEYJ 822 V (8.2 kΩ)
R6	7030003650	Resistor	ERJ3GEYJ 563 V (56 kΩ)
R7	7030003460	Resistor	ERJ3GEYJ 152 V (1.5 kΩ)
R8	7030003320	Resistor	ERJ3GEYJ 101 V (100 Ω)
R9	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
C1	4030004240	Ceramic	GRM39 B 102K 50PT
C2	4030004010	Ceramic	GRM39 SL 080D 50PT
C3	4610001270	Trimmer	ECRJA010A12W
C4	4030003960	Ceramic	GRM39 SL 030C 50PT
C5	4030003940	Ceramic	GRM39 SL 010C 50PT
C6	4030003940	Ceramic	GRM39 SL 010C 50PT
C7	4030004240	Ceramic	GRM39 B 102K 50PT
C8	4030004240	Ceramic	GRM39 B 102K 50PT
C9	4030003930	Ceramic	GRM39 SL 0R5C 50PT
C10	4030003970	Ceramic	GRM39 SL 040C 50PT
C11	4030003690	Ceramic	GRM39 B 471K 50PT
C12	4030004240	Ceramic	GRM39 B 102K 50PT
C14	4030004100	Ceramic	GRM39 SL 470J 50PT
EP1	0910026991	P.C. Board	B 2720A (U VCO)

[PRT UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
Q1	1520000200	Transistor	2SB798-T2 DK
Q2	1530002280	Transistor	2SC4081 T107 S
D1	1790000680	Diode	SB20-03P-TD
D2	1790000670	Diode	SB07-03C-TA
D5	1790000590	Diode	MA110 (TW)
D6	1730002160	Zener	02CZ5.1-Z (TE85R)
R1	7030003250	Resistor	ERJ3GEYJ 270 V (27 Ω)
R2	7030003380	Resistor	ERJ3GEYJ 331 V (330 Ω)
R3	7030003440	Resistor	ERJ3GEYJ 102 V (1 kΩ)
R4	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R5	7030003470	Resistor	ERJ3GEYJ 182 V (1.8 kΩ)
R6	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R7	7030003320	Resistor	ERJ3GEYJ 101 V (100 Ω)
R8	7030003440	Resistor	ERJ3GEYJ 102 V (1 kΩ)
R9	7030003250	Resistor	ERJ3GEYJ 270 V (27 Ω)
C1	4030004240	Ceramic	GRM39 B 102K 50PT
C2	4030004240	Ceramic	GRM39 B 102K 50PT
C3	4030004100	Ceramic	GRM39 SL 470J 50PT
C4	4030004240	Ceramic	GRM39 B 102K 50PT
C5	4030004240	Ceramic	GRM39 B 102K 50PT
C6	4030004240	Ceramic	GRM39 B 102K 50PT
EP1	0910029600	P.C. Board	B 2874 (PRT)

[LOGIC UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC1	1140002040	IC	SC-4608H B23
IC2	1140002050	IC	SC-L4808H B24
IC3	1130005640	IC	TC4W53F (TE12L)
IC6	1110002400	IC	NJM2107F (TE1)
IC7	1110002400	IC	NJM2107F (TE1)
IC8	1110002410	IC	NJM2406F (TE1)
IC9	1110002410	IC	NJM2406F (TE1)
IC10	1130003710	IC	TC4S71F (TE85R)
IC11	1180000680	IC	S-87050EF-VR-T1
IC12	1130003760	IC	TC4S81F (TE85R)
IC13	1130004330	IC	LC7385M
IC14	1130005640	IC	TC4W53F (TE12L)
IC15	1130003610	IC	TC4SU69F (TE85R)
IC16	1130003610	IC	TC4SU69F (TE85R)
IC17	1130003610	IC	TC4SU69F (TE85R)
IC18	1130004200	IC	TC4S66F (TE85R)
IC19	1130004170	IC	TC4S01F (TE85R)
IC20	1110002400	IC	NJM2107F (TE1)
Q1	1540000350	Transistor	2SD2216-S (TX)
Q2	1540000350	Transistor	2SD2216-S (TX)
Q3	1510000510	Transistor	2SA1576 T107 R
Q4	1590001130	Transistor	UN9110 (TX)
Q5	1590001150	Transistor	UN9211 (TX)
Q10	1540000350	Transistor	2SD2216-S (TX)
Q11	1540000350	Transistor	2SD2216-S (TX)
Q12	1540000350	Transistor	2SD2216-S (TX)
Q13	1590001170	Transistor	XP1501-(TX).AB
Q18	1590001180	Transistor	XP1210 (TX)
Q19	1590001180	Transistor	XP1210 (TX)
Q20	1590001180	Transistor	XP1210 (TX)
Q21	1590001180	Transistor	XP1210 (TX)
Q23	1590001140	Transistor	UN9210 (TX)
Q24	1590001140	Transistor	UN9210 (TX)
Q25	1590001130	Transistor	UN9110 (TX)
Q26	1520000430	Transistor	2SB1462-R (TX)
Q27	1540000350	Transistor	2SD2216-S (TX)
Q28	1510000510	Transistor	2SA1576 T107 R
Q29	1540000350	Transistor	2SD2216-S (TX)
Q30	1540000350	Transistor	2SD2216-S (TX)
Q31	1590001140	Transistor	UN9210 (TX)
Q32	1590001130	Transistor	UN9110 (TX)
Q33	1590001140	Transistor	UN9210 (TX)
D3	1790000860	Diode	MA133 (TX)
D4	1790000590	Diode	MA110 (TW)
D5	1790000820	Diode	MA132K (TX)
D6	1790000840	Diode	MA132WA (TX)
D7	1790000870	Diode	MA1S121 (TX)
D8	1790000840	Diode	MA132WA (TX)
D9	1790000840	Diode	MA132WA (TX)
D10	1790000840	Diode	MA132WA (TX)
D11	1790000840	Diode	MA132WA (TX)
D12	1790000840	Diode	MA132WA (TX)
D13	1790000840	Diode	MA132WA (TX)
D14	1790000840	Diode	MA132WA (TX)
D15	1790000820	Diode	MA132K (TX) (EUR-1,UK,AUS)
	1790000830	Diode	MA132HK (TX) (USA)
	1790000850	Diode	MA132WK (TX) (SEA)
D16	1790000830	Diode	MA132HK (TX) (EUR-2,USA,AUS,SEA)
D18	1790000830	Diode	MA132HK (TX)
D22	1790000810	Diode	MA132A (TX)
D25	1750000190	Diode	1SS322 (TE85R)
D26	1790000810	Diode	MA132A (TX)
D27	1790000850	Diode	MA132WK (TX)
D28	1790000490	Diode	HSM88AS-TR
D29	1790000490	Diode	HSM88AS-TR
D30	1790000850	Diode	MA132WK (TX)
D31	1790000860	Diode	MA133 (TX)
D32	1790000850	Diode	MA132WK (TX)
D33	1790000860	Diode	MA133 (TX)
D34	1790000860	Diode	MA133 (TX)
D35	1790000860	Diode	MA133 (TX)
D36	1790000660	Diode	MA728 (TW)

[LOGIC UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
D37	1790000860	Diode	MA133 (TX)
D38	1790000860	Diode	MA133 (TX)
X1	6060000391	Crystal	CSB800J201T
X2	6060000391	Crystal	CSB800J201T
X3	6050005800	Crystal	DT-26S 32.768KHZ
X4	6060000150	Crystal	CSAC3.58MGC300CD
R1	7410000610	Resistor Array	EXB-V4V 153J
R3	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R4	7310002600	Trimmer	RV-110 (RH03 A3AS4X0AA)473
R8	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R9	7030003580	Resistor	ERJ3GEYJ 153 V (15 kΩ)
R11	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R12	7030003550	Resistor	ERJ3GEYJ 822 V (8.2 kΩ)
R13	7410000610	Resistor Array	EXB-V4V 153J
R15	7030003480	Resistor	ERJ3GEYJ 222 V (2.2 kΩ)
R16	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R17	7030003760	Resistor	ERJ3GEYJ 474 V (470 kΩ)
R18	7030003620	Resistor	ERJ3GEYJ 333 V (33 kΩ)
R19	7030003440	Resistor	ERJ3GEYJ 102 V (1 kΩ)
R20	7030003450	Resistor	ERJ3GEYJ 122 V (1.2 kΩ)
R21	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R22	7030003440	Resistor	ERJ3GEYJ 102 V (1 kΩ)
R23	7030003840	Resistor	ERJ3GEYJ 225 V (2.2 MΩ) (EUR-2,AUS,SEA,EUR-1,UK)
	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ) (USA)
R24	7030003400	Resistor	ERJ3GEYJ 471 V (470 Ω)
R25	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R26	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R27	7030003440	Resistor	ERJ3GEYJ 102 V (1 kΩ)
R28	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R29	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R30	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R31	7030003580	Resistor	ERJ3GEYJ 153 V (15 kΩ)
R32	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R33	7030003620	Resistor	ERJ3GEYJ 333 V (33 kΩ)
R34	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R35	7030003610	Resistor	ERJ3GEYJ 273 V (27 kΩ)
R36	7030003580	Resistor	ERJ3GEYJ 153 V (15 kΩ)
R41	7030003200	Resistor	ERJ3GEYJ 100 V (10 Ω)
R42	7030003360	Resistor	ERJ3GEYJ 221 V (220 Ω)
R43	7030003360	Resistor	ERJ3GEYJ 221 V (220 Ω)
R44	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R45	7030003550	Resistor	ERJ3GEYJ 822 V (8.2 kΩ)
R46	7030003330	Resistor	ERJ3GEYJ 121 V (120 Ω)
R47	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R48	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R63	7030003760	Resistor	ERJ3GEYJ 474 V (470 kΩ)
R64	7030003880	Resistor	ERJ3GEYJ 244 V (240 kΩ)
R65	7030003690	Resistor	ERJ3GEYJ 124 V (120 kΩ)
R66	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R67	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R68	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R69	7410000560	Resistor Array	EXB-V4V 474J
R73	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R74	7410000590	Resistor Array	EXB-V4V 473J
R76	7410000590	Resistor Array	EXB-V4V 473J
R78	7410000590	Resistor Array	EXB-V4V 473J
R80	7030003670	Resistor	ERJ3GEYJ 823 V (82 kΩ)
R81	7410000560	Resistor Array	EXB-V4V 474J
R83	7030003880	Resistor	ERJ3GEYJ 244 V (240 kΩ)
R84	7030003730	Resistor	ERJ3GEYJ 274 V (270 kΩ)
R85	7030003880	Resistor	ERJ3GEYJ 244 V (240 kΩ)
R86	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R87	7030003880	Resistor	ERJ3GEYJ 244 V (240 kΩ)
R88	7030003730	Resistor	ERJ3GEYJ 274 V (270 kΩ)
R89	7030003880	Resistor	ERJ3GEYJ 244 V (240 kΩ)
R90	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R91	7410000560	Resistor Array	EXB-V4V 474J
R92	7410000580	Resistor Array	EXB-V4V 224J
R93	7410000560	Resistor Array	EXB-V4V 474J (EUR-1,UK,EUR-2)
R95	7410000600	Resistor Array	EXB-V4V 222J

[LOGIC UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R97	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R98	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R99	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R100	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R101	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R102	7030003760	Resistor	ERJ3GEYJ 474 V (470 kΩ)
R103	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R104	7030004020	Resistor	ERJ3GEYG 243 V (24 kΩ)
R105	7030003360	Resistor	ERJ3GEYJ 221 V (220 Ω)
R106	7030003360	Resistor	ERJ3GEYJ 221 V (220 Ω)
R107	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R108	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R109	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R110	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R111	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R112	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R113	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R114	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R115	7030003740	Resistor	ERJ3GEYJ 334 V (330 kΩ)
R116	7030003700	Resistor	ERJ3GEYJ 154 V (150 kΩ)
R117	7030003720	Resistor	ERJ3GEYJ 224 V (220 kΩ)
R118	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R121	7410000570	Resistor Array	EXB-V8V 474J
R122	7410000570	Resistor Array	EXB-V8V 474J
R123	7410000570	Resistor Array	EXB-V8V 474J
R124	7410000570	Resistor Array	EXB-V8V 474J
R127	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R128	7310002600	Trimmer	RV-110 (RH03 A3AS4X0AA) (EUR-1)
	7310002600	Trimmer	RV-110 (RH03 A3AS4X0AA) (UK)
	7310002600	Trimmer	RV-110 (RH03 A3AS4X0AA) (EUR-2)
R130	7030003840	Resistor	ERJ3GEYJ 225 V (2.2 MΩ) (EUR-1,UK,EUR-2)
R131	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R132	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R134	7030003690	Resistor	ERJ3GEYJ 124 V (120 kΩ)
R135	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R136	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R137	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R138	7030003800	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R139	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R140	7030003690	Resistor	ERJ3GEYJ 124 V (120 kΩ)
R141	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R142	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R143	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R144	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R145	7410000560	Resistor Array	EXB-V4V 474J
R146	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R147	7030003640	Resistor	ERJ3GEYJ 473 V (47 kΩ)
R148	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R149	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R150	7030003760	Resistor	ERJ3GEYJ 474 V (470 kΩ)
R151	7030003620	Resistor	ERJ3GEYJ 333 V (33 kΩ)
R152	7030003690	Resistor	ERJ3GEYJ 124 V (120 kΩ)
R153	7030003880	Resistor	ERJ3GEYJ 244 V (240 kΩ)
R154	7030003760	Resistor	ERJ3GEYJ 474 V (470 kΩ)
R155	7030003200	Resistor	ERJ3GEYJ 100 V (10 Ω)
R156	7030003650	Resistor	ERJ3GEYJ 563 V (56 kΩ)
R157	7030003850	Resistor	ERJ3GEYJ 563 V (56 kΩ)
R158	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R159	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R160	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R161	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R163	7030003760	Resistor	ERJ3GEYJ 474 V (470 kΩ)
R164	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R165	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R167	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R168	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R170	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R171	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
C2	4030004240	Ceramic	GRM39 B 102K 50PT
C3	4030004150	Ceramic	GRM39 SL 820J 50PT
C4	4030004210	Ceramic	GRM39 SL 221J 50PT
C6	4030008960	Ceramic	C2012 JB 1C 104K-T-A

[LOGIC UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
C7	4030004150	Ceramic	GRM39 SL 820J 50PT
C8	4030004210	Ceramic	GRM39 SL 221J 50PT
C9	4030008810	Ceramic	GRM39 CH 150J 50PT
C10	4030008810	Ceramic	GRM39 CH 150J 50PT
C11	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C12	4550003040	Tantalum	TEMSVB2 0J 106M-8 L
C13	4030004240	Ceramic	GRM39 B 102K 50PT
C14	4030004240	Ceramic	GRM39 B 102K 50PT
C15	4030004240	Ceramic	GRM39 B 102K 50PT
C16	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C17	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C18	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C19	4030008830	Ceramic	GRM39 B 223K 25PT
C20	4030008830	Ceramic	GRM39 B 223K 25PT
C21	4550003030	Tantalum	TEMSVA 0J 475M-8L
C22	4030004240	Ceramic	GRM39 B 102K 50PT
C23	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C28	4030004240	Ceramic	GRM39 B 102K 50PT
C30	4030004240	Ceramic	GRM39 B 102K 50PT
C31	4030004070	Ceramic	GRM39 SL 330J 50PT
C32	4030004240	Ceramic	GRM39 B 102K 50PT
C33	4030009220	Ceramic	GRM39 B 681K 50PT
C34	4030004240	Ceramic	GRM39 B 102K 50PT
C35	4030004070	Ceramic	GRM39 SL 330J 50PT
C36	4030004240	Ceramic	GRM39 B 102K 50PT
C37	4030003890	Ceramic	GRM39 B 471K 50PT
C38	4030004310	Ceramic	GRM39 B 103K 25PT
C39	4030004310	Ceramic	GRM39 B 103K 25PT
C40	4030008900	Ceramic	C1608 JB 1C 333K-T-A
C41	4030008900	Ceramic	C1608 JB 1C 333K-T-A
C42	4030004210	Ceramic	GRM39 SL 221J 50PT
C43	4550003060	Tantalum	TEMSVC 0J 336M-12 L
C44	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C45	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C46	4550004000	Tantalum	TEMSVD 0J 686M-12 L
C47	4030004240	Ceramic	GRM39 B 102K 50PT
C48	4030004240	Ceramic	GRM39 B 102K 50PT
C49	4550004020	Tantalum	TEMSVD 1C 336M-12 L
C50	4550003040	Tantalum	TEMSVB2 0J 106M-8 L
C51	4030004240	Ceramic	GRM39 B 102K 50PT
C52	4550000790	Tantalum	TESVD 0J 476M-12L
C53	4030004070	Ceramic	GRM39 SL 330J 50PT
C54	4030004080	Ceramic	GRM39 SL 390J 50PT
C55	4030008790	Ceramic	GRM39 F 104Z 25PT
C56	4030008790	Ceramic	GRM39 F 104Z 25PT
C57	4030004240	Ceramic	GRM39 B 102K 50PT
C58	4030003890	Ceramic	GRM39 B 471K 50PT
C60	4030003890	Ceramic	GRM39 B 471K 50PT
C62	4030003890	Ceramic	GRM39 B 471K 50PT
C63	4030003890	Ceramic	GRM39 B 471K 50PT
C64	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C65	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C66	4030008830	Ceramic	GRM39 B 223K 25PT
C69	4030008830	Ceramic	GRM39 B 223K 25PT
C70	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C71	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C72	4030004240	Ceramic	GRM39 B 102K 50PT
C73	4030008790	Ceramic	GRM39 F 104Z 25PT
C74	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C75	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C76	4030008790	Ceramic	GRM39 F 104Z 25PT
C77	4030008790	Ceramic	GRM39 F 104Z 25PT
C79	4550003030	Tantalum	TEMSVA 0J 475M-8L
C80	4550003030	Tantalum	TEMSVA 0J 475M-8L
C81	4030004310	Ceramic	GRM39 B 103K 25PT
C82	4030004310	Ceramic	GRM39 B 103K 25PT
C83	4030004240	Ceramic	GRM39 B 102K 50PT
C84	4030004070	Ceramic	GRM39 SL 330J 50PT
C85	4030004310	Ceramic	GRM39 B 103K 25PT
DS1	5030000630	LCD	LD-BU5192J (E-5395)
DS2	5040001110	LED	SLM-23VMWS T97B
DS3	5040000880	LED	SLM-13MWS T97B
DS4	5040000880	LED	SLM-13MWS T97B
SP1	2510000530	Speaker	T028S1410810

[LOGIC UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
BT1	3020000160	Lithium Battery	VL2020-1VC
MC1	7700000861	Microphone	WM-62A103
SP1	2510000530	Speaker	T028S14I0810
EP1	8930020150	LCD contact strip	SRCN-873-W
EP2	8930020160	LCD contact strip	SRCN-873
EP3	0910030394	P.C. Board	B 3074D (LOGIC)
EP4	0910028842	P.C. Board	B 2873B

[PTT UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R1	7210001910	Variable Resistor	RV-199 (RK0972210)10KB
R2	7210001910	Variable Resistor	RV-199 (RK0972210)10KB
S1	2260001320	Switch	SW-121 (SKHUPF)
S2	2260001320	Switch	SW-121 (SKHUPF)
S3	2260001400	Switch	SW-122 (RK097103H)
EP1	0910028873	P.C. Board	B 2871C
EP2	0910029831	P.C. Board	B 3039A (PTT)

[JACK UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
D1	1790000680	Diode	SB20-03P-TD
R1	7030000340	Resistor	MCR10EZHJ 470 Ω (471)
C1	4030004240	Ceramic	GRM39 B 102K 50PT
C2	4030004240	Ceramic	GRM39 B 102K 50PT
C3	4030004240	Ceramic	GRM39 B 102K 50PT
C4	4030004240	Ceramic	GRM39 B 102K 50PT
C6	4030004240	Ceramic	GRM39 B 102K 50PT
C7	4030004240	Ceramic	GRM39 B 102K 50PT
C8	4030004240	Ceramic	GRM39 B 102K 50PT
C9	4030004240	Ceramic	GRM39 B 102K 50PT
C10	4030004240	Ceramic	GRM39 B 102K 50PT
C11	4030004240	Ceramic	GRM39 B 102K 50PT
EP1	0910028864	P.C. Board	B 2868D (JACK)

[AF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
IC1	1110002420	IC	NJM2073M (T1)
Q1	1590001170	Transistor	XP1501-(TX).AB
Q2	1520000270	Transistor	2SB1182 TL Q
R1	7030003200	Resistor	ERJ3GEYJ 100 V (10 Ω)
R2	7030003200	Resistor	ERJ3GEYJ 100 V (10 Ω)
R3	7030003570	Resistor	ERJ3GEYJ 123 V (12 kΩ)
R4	7030003570	Resistor	ERJ3GEYJ 123 V (12 kΩ)

[AF UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
R5	7030003330	Resistor	ERJ3GEYJ 121 V (120 Ω)
R6	7030003330	Resistor	ERJ3GEYJ 121 V (120 Ω)
R7	7030003570	Resistor	ERJ3GEYJ 123 V (12 kΩ)
R8	7030003570	Resistor	ERJ3GEYJ 123 V (12 kΩ)
R9	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R10	7030003450	Resistor	ERJ3GEYJ 122 V (1.2 kΩ)
R11	7030003790	Resistor	ERJ3GEYJ 824 V (820 kΩ)
R12	7030003460	Resistor	ERJ3GEYJ 152 V (1.5 kΩ)
C1	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C2	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C3	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C4	4510003180	Electrolytic	6.3 RC2 100 µF (D=5.0)
C5	4510003180	Electrolytic	6.3 RC2 100 µF (D=5.0)
C6	4550002960	Tantalum	TESVA 1C 155M1-8L
C7	4030003890	Ceramic	GRM39 B 471K 50PT
C8	4550002960	Tantalum	TESVA 1C 155M1-8L
C9	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C10	4030003890	Ceramic	GRM39 B 471K 50PT
C11	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C12	4510003180	Electrolytic	6.3 RC2 100 µF (D=5.0)
C13	4030003890	Ceramic	GRM39 B 471K 50PT
C14	4030003890	Ceramic	GRM39 B 471K 50PT
EP1	6910003420	Lead Frame	AR1.27-0.7-12.3
EP2	0910028823	P.C. Board	B 2870C (AF)

[CONNECTOR UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
L1	6110002300	Coil	LA-412
L2	6110002010	Coil	LA-224
L3	6110002320	Coil	LA-414
L4	6110002320	Coil	LA-414
L5	6110002040	Coil	LA-225
R1	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R2	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R3	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
C1	4550003030	Tantalum	TEMSVA 0J 475M-8L
C2	4030004010	Ceramic	GRM39 SL 080D 50PT
C3	4030004100	Ceramic	GRM39 SL 470J 50PT
C4	4030003980	Ceramic	GRM39 SL 050C 50PT
C5	4030004050	Ceramic	GRM39 SL 220J 50PT
C6	4030004000	Ceramic	GRM39 SL 070D 50PT
C7	4030004020	Ceramic	GRM39 SL 100D 50PT
C8	4030003940	Ceramic	GRM39 SL 010C 50PT
C9	4030003880	Ceramic	GRM39 SL 160J 50PT
C10	4030003950	Ceramic	GRM39 SL 020C 50PT
C11	4030004040	Ceramic	GRM39 SL 150J 50PT
C12	4030003950	Ceramic	GRM39 SL 020C 50PT
C13	4030004240	Ceramic	GRM39 B 102K 50PT
C14	4030004240	Ceramic	GRM39 B 102K 50PT
C15	4030004240	Ceramic	GRM39 B 102K 50PT
C16	4030004240	Ceramic	GRM39 B 102K 50PT
EP1	0910028924	P.C. Board	B 2869D
EP2	0910028791	P.C. Board	B 2875A (CONNECTOR)

[AF FIL UNIT]

REF. NO.	ORDER NO.	DESCRIPTION	
Q1	1540000350	Transistor	2SD2216-S (TX)
Q2	1590001170	Transistor	XP1501-(TX).AB
Q3	1590001190	Transistor	XP6501-(TX).AB
Q4	1540000350	Transistor	2SD2216-S (TX)
Q5	1590001170	Transistor	XP1501-(TX).AB
Q6	1590001190	Transistor	XP6501-(TX).AB
D1	1790000860	Diode	MA133 (TX)
D2	1790000860	Diode	MA133 (TX)
D3	1790000830	Diode	MA132HK (TX)
D4	1790000860	Diode	MA133 (TX)
R2	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R3	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R4	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R5	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R6	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R7	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R8	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R9	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R10	7030003480	Resistor	ERJ3GEYJ 222 V (2.2 kΩ)
R11	7030003550	Resistor	ERJ3GEYJ 822 V (8.2 kΩ)
R12	7030003760	Resistor	ERJ3GEYJ 474 V (470 kΩ)
R13	7030003700	Resistor	ERJ3GEYJ 154 V (150 kΩ)
R14	7030003580	Resistor	ERJ3GEYJ 153 V (15 kΩ)
R16	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R17	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R18	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R19	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R20	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R21	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R22	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R23	7030003630	Resistor	ERJ3GEYJ 393 V (39 kΩ)
R24	7030003480	Resistor	ERJ3GEYJ 222 V (2.2 kΩ)
R25	7030003550	Resistor	ERJ3GEYJ 822 V (8.2 kΩ)
R26	7030003760	Resistor	ERJ3GEYJ 474 V (470 kΩ)
R27	7030003700	Resistor	ERJ3GEYJ 154 V (150 kΩ)
R28	7030003580	Resistor	ERJ3GEYJ 153 V (15 kΩ)
R29	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R30	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
C1	4550004010	Tantalum	TEMSVA2 1A 105M-8 L
C2	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C3	4030004240	Ceramic	GRM39 B 102K 50PT
C4	4030004250	Ceramic	GRM39 B 222K 50PT
C5	4030004310	Ceramic	GRM39 B 103K 25PT
C6	4030004310	Ceramic	GRM39 B 103K 25PT
C7	4550004010	Tantalum	TEMSVA2 1A 105M-8 L
C8	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C9	4030004240	Ceramic	GRM39 B 102K 50PT
C10	4030004250	Ceramic	GRM39 B 222K 50PT
C11	4030004310	Ceramic	GRM39 B 103K 25PT
C12	4030004310	Ceramic	GRM39 B 103K 25PT
C13	4030004240	Ceramic	GRM39 B 102K 50PT
C14	4030008960	Ceramic	C2012 JB 1C 104K-T-A
C15	4030004240	Ceramic	GRM39 B 102K 50PT
C16	4030008960	Ceramic	C2012 JB 1C 104K-T-A
EP1	0910028941	P.C. Board	B 2925A (AF FIL)

[T SQL UNIT] (USA version only)

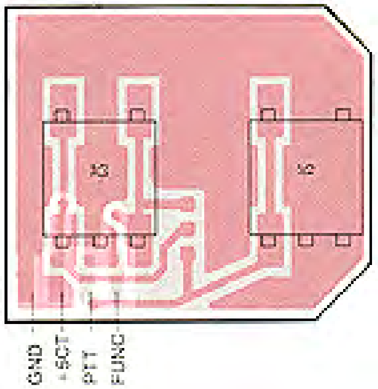
REF. NO.	ORDER NO.	DESCRIPTION	
IC1	1130005100	IC	FX365LG
IC2	1130005100	IC	FX365LG
IC3	1130003610	IC	TC4SU69F (TE85R)

[TSQL UNIT]

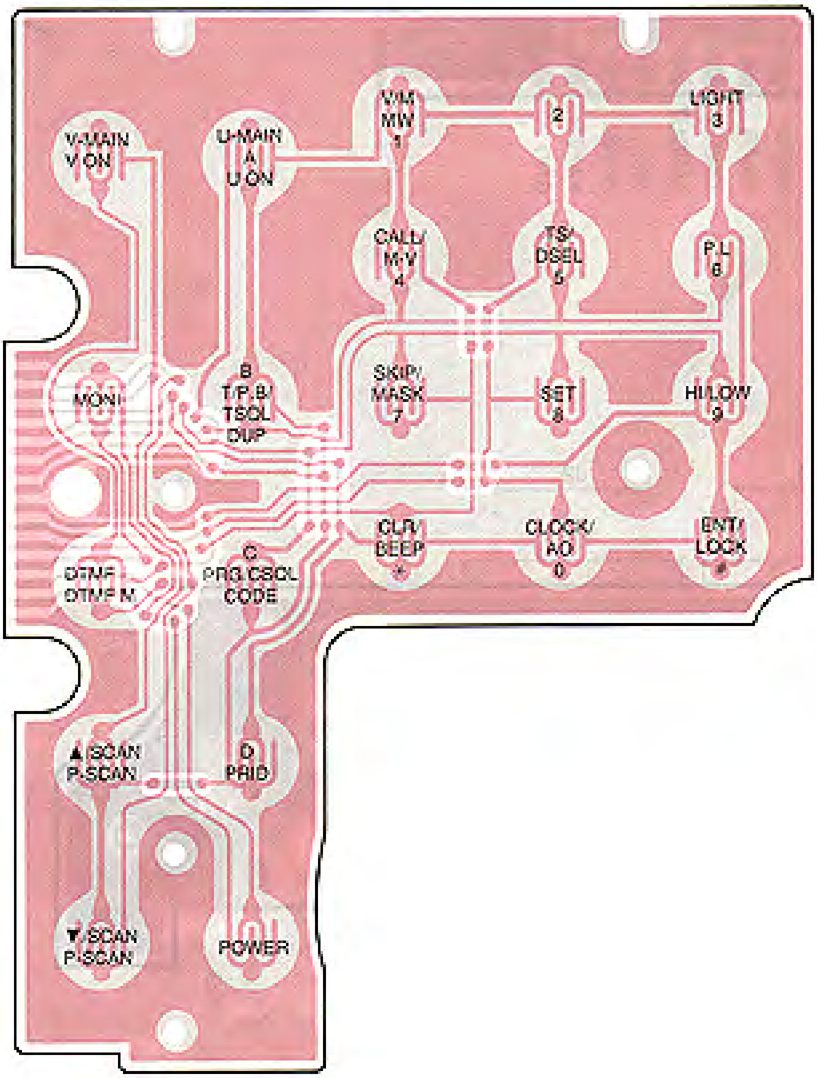
REF. NO.	ORDER NO.	DESCRIPTION	
Q1	1590000430	Transistor	DTC144EU T107
Q2	1510000580	Transistor	2SA1362-GR (TE85R)
Q3	1590000430	Transistor	DTC144EU T107
Q4	1510000580	Transistor	2SA1362-GR (TE85R)
Q5	1530002280	Transistor	2SC4081 T107 S
Q6	1530002280	Transistor	2SC4081 T107 S
Q7	1530002280	Transistor	2SC4081 T107 S
D1	1790000590	Diode	MA110 (TW)
D2	1790000590	Diode	MA110 (TW)
D3	1790000870	Diode	MA1S121 (TX)
D4	1160000060	Diode	DAN202U T107
D5	1790000870	Diode	MA1S121 (TX)
X1	6060000480	Crystal	CSB1000J221T
R1	7030003570	Resistor	ERJ3GEYJ 123 V (12 kΩ)
R2	7030003700	Resistor	ERJ3GEYJ 154 V (150 kΩ)
R3	7030003840	Resistor	ERJ3GEYJ 225 V (2.2 MΩ)
R4	7030003740	Resistor	ERJ3GEYJ 334 V (330 kΩ)
R5	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R6	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R7	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R9	7030003570	Resistor	ERJ3GEYJ 123 V (12 kΩ)
R10	7030003700	Resistor	ERJ3GEYJ 154 V (150 kΩ)
R11	7030003580	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R12	7030003560	Resistor	ERJ3GEYJ 103 V (10 kΩ)
R13	7310003550	Trimmer	MVR32HXBR N473
R14	7030003840	Resistor	ERJ3GEYJ 225 V (2.2 MΩ)
R15	7030003740	Resistor	ERJ3GEYJ 334 V (330 kΩ)
R16	7030003600	Resistor	ERJ3GEYJ 223 V (22 kΩ)
R17	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R18	7030003780	Resistor	ERJ3GEYJ 684 V (680 kΩ)
R19	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R20	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R21	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R22	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R23	7030003480	Resistor	ERJ3GEYJ 222 V (2.2 kΩ)
R24	7030003520	Resistor	ERJ3GEYJ 472 V (4.7 kΩ)
R25	7030003480	Resistor	ERJ3GEYJ 222 V (2.2 kΩ)
R26	7030003780	Resistor	ERJ3GEYJ 684 V (680 kΩ)
R27	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R28	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R29	7030003800	Resistor	ERJ3GEYJ 105 V (1 MΩ)
R30	7030003680	Resistor	ERJ3GEYJ 104 V (100 kΩ)
R31	7030003640	Resistor	ERJ3GEYJ 473 V (47 kΩ)
R32	7030003710	Resistor	ERJ3GEYJ 184 V (180 kΩ)
R33	7030003710	Resistor	ERJ3GEYJ 184 V (180 kΩ)
R34	7030003580	Resistor	ERJ3GEYJ 153 V (15 kΩ)
C1	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C2	4030006850	Ceramic	C1608 JB 1H 471K-T-A
C3	4030006900	Ceramic	C1608 JB 1E 103K-T-A
C4	4550000420	Tantalum	TESVA 1A 105M1-8L
C5	4550000530	Tantalum	TESVA 1V 104M1-8L
C6	4030006540	Ceramic	C1608 SL 1H 030C-T-A
C7	4550002950	Tantalum	TESVA 0J 335M1-8L
C8	4030007170	Ceramic	C1608 CH 1H 221J-T-A
C9	4030007170	Ceramic	C1608 CH 1H 221J-T-A
C10	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C11	4030006850	Ceramic	C1608 JB 1H 471K-T-A
C12	4030006900	Ceramic	C1608 JB 1E 103K-T-A
C13	4550000420	Tantalum	TESVA 1A 105M1-8L
C15	4030006540	Ceramic	C1608 SL 1H 030C-T-A
C16	4550000530	Tantalum	TESVA 1V 104M1-8L
C17	4550002950	Tantalum	TESVA 0J 335M1-8L
C18	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C19	4030008920	Ceramic	C1608 JB 1C 473K-T-A
C20	4030006860	Ceramic	C1608 JB 1H 102K-T-A
EP1	0910030531	P.C. Board	B 3110A (T SQL)

SECTION 7 BOARD LAYOUTS

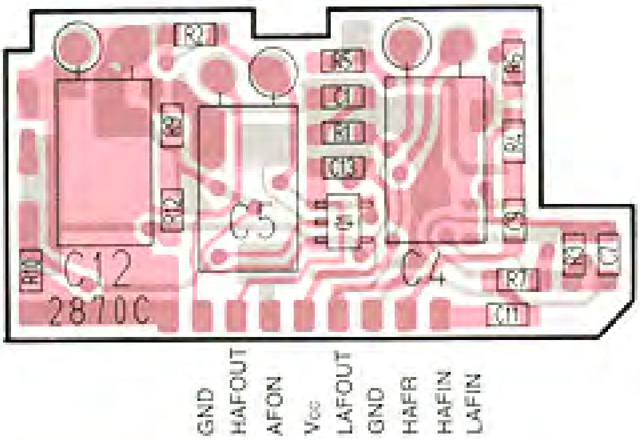
7-1 PTT UNIT



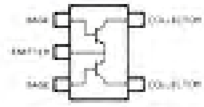
7-2 KEY UNIT



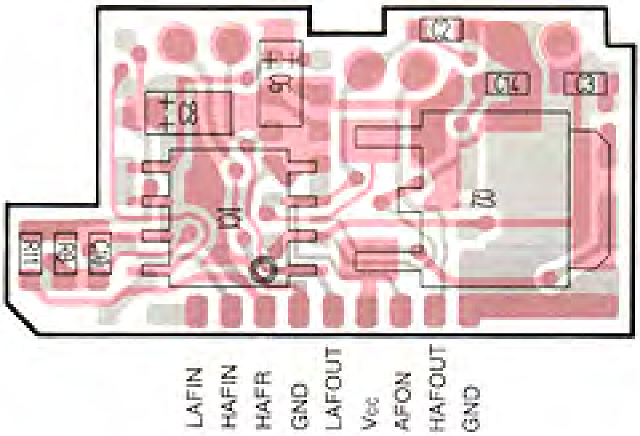
7-3 AF UNIT



XP1501
Q1



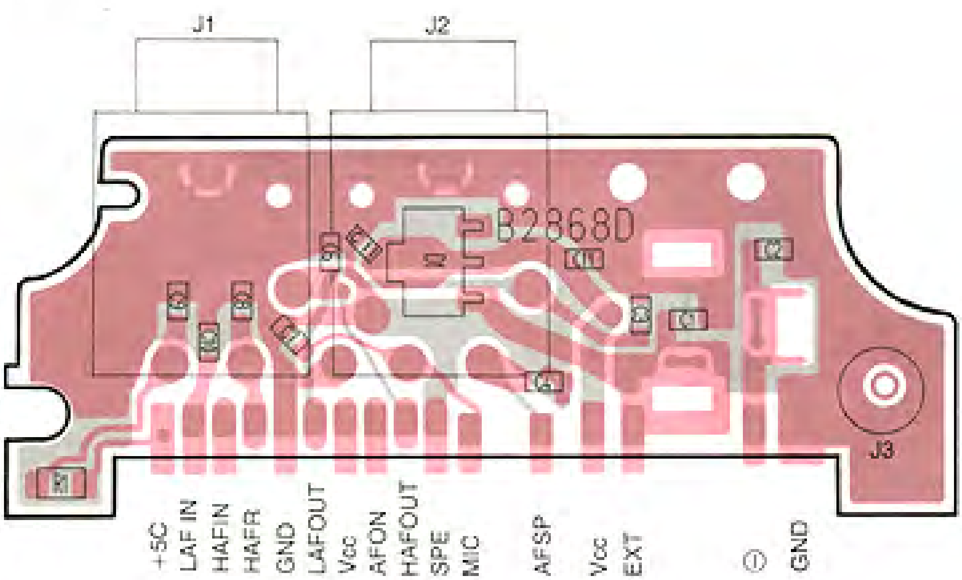
Symbol: 5R



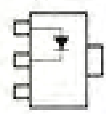
2SB1182
Q2



7-4 JACK UNIT

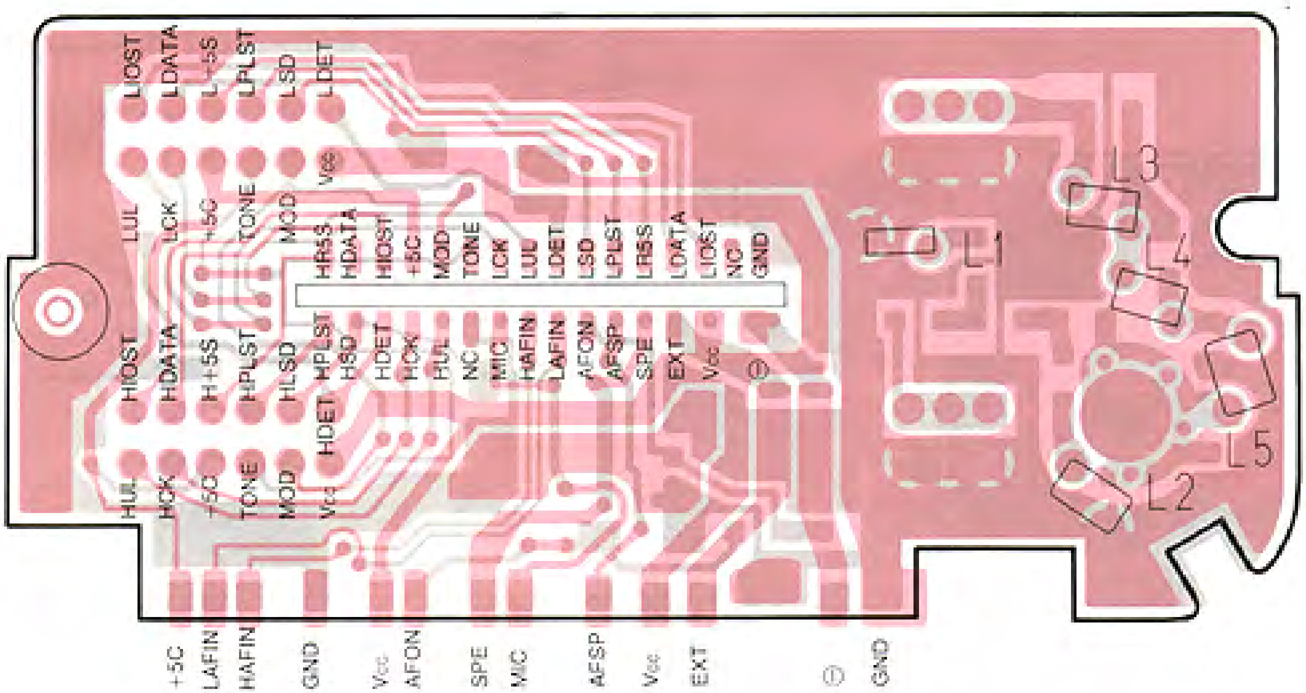


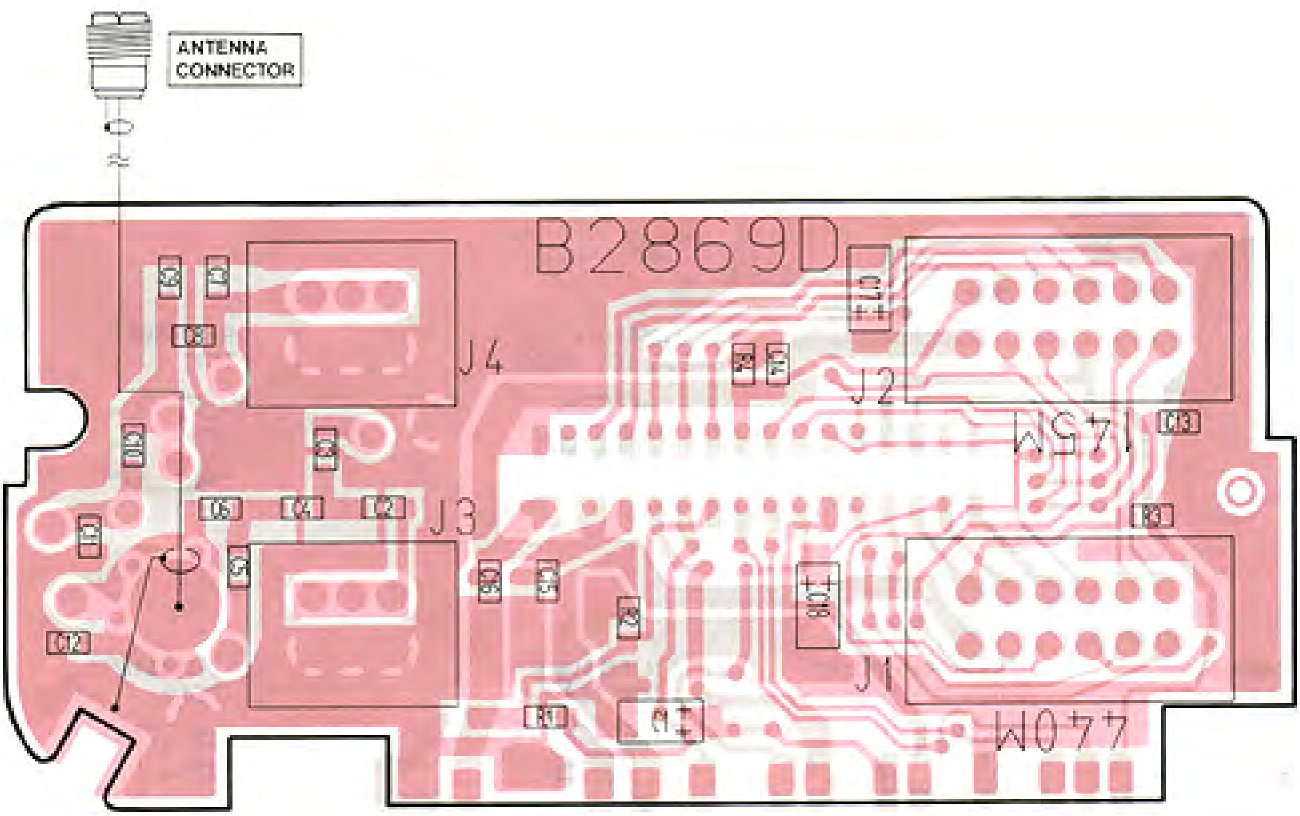
SB20
D1



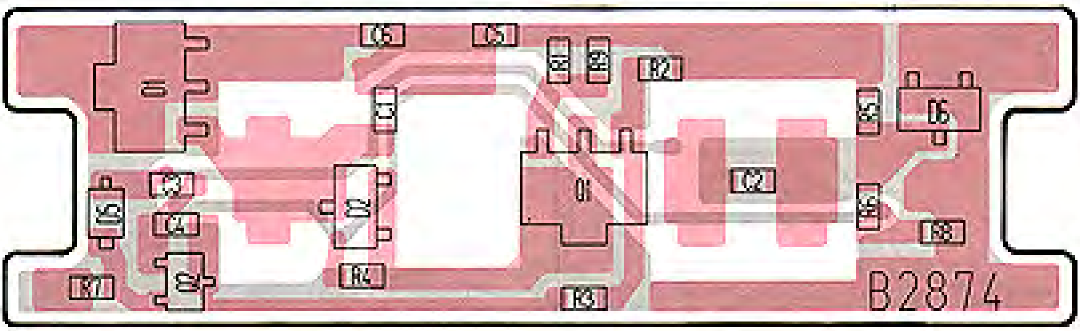
Symbol: SC

7-5 CONNECTOR UNIT

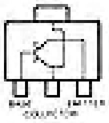




7-6 PRT UNIT

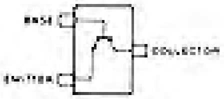


2SB798
Q1



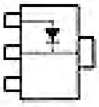
Symbol: DK

2SC4081S
Q2



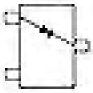
Symbol: BS

SB20
D1



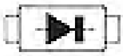
Symbol: SC

SB07
D2



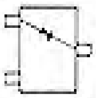
Symbol: J

MA110
D5



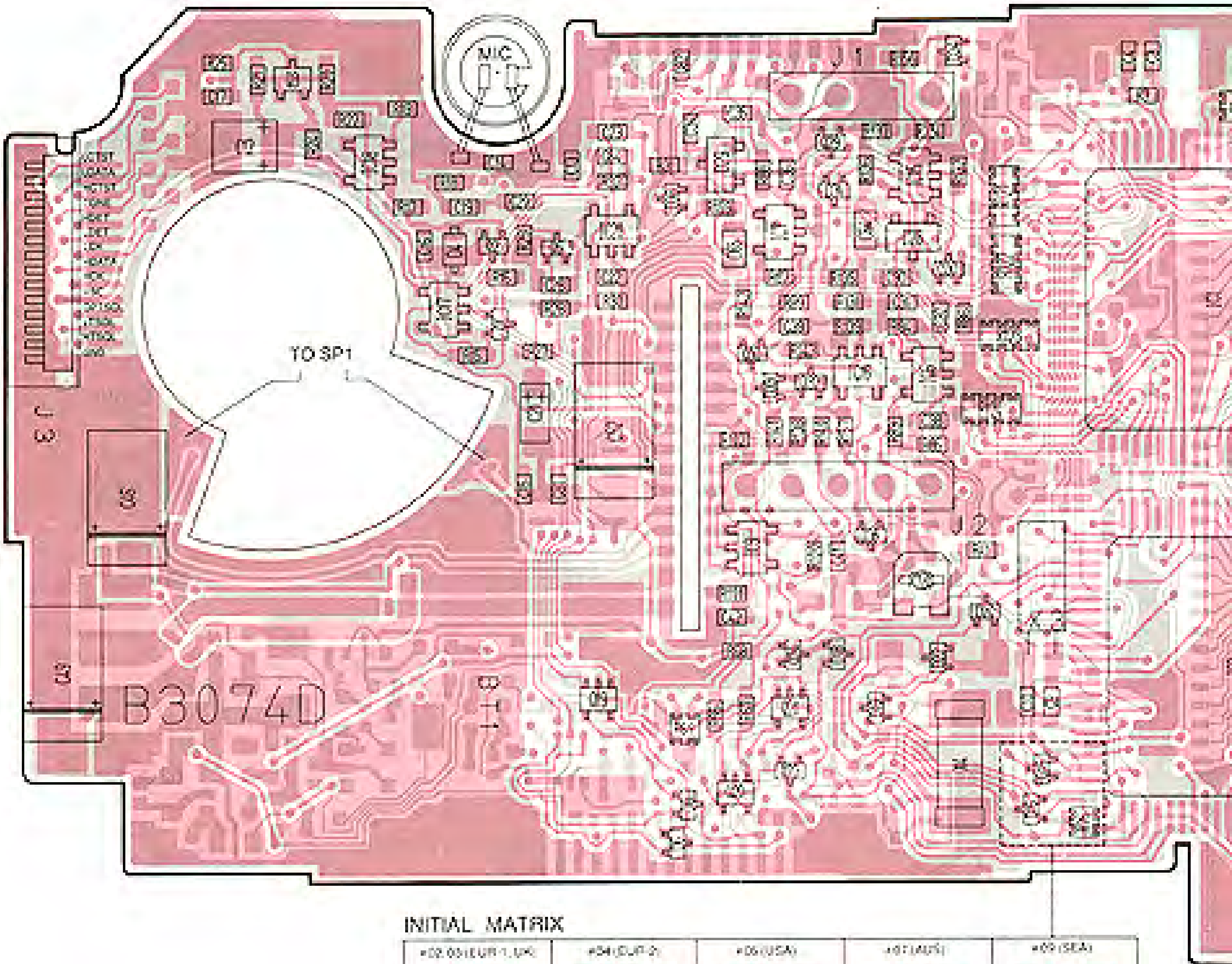
Symbol: 1A

02CZ5.1-Z
D6



Symbol: 5.1S

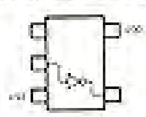
7-7 LOGIC UNIT



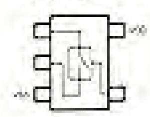
INITIAL MATRIX

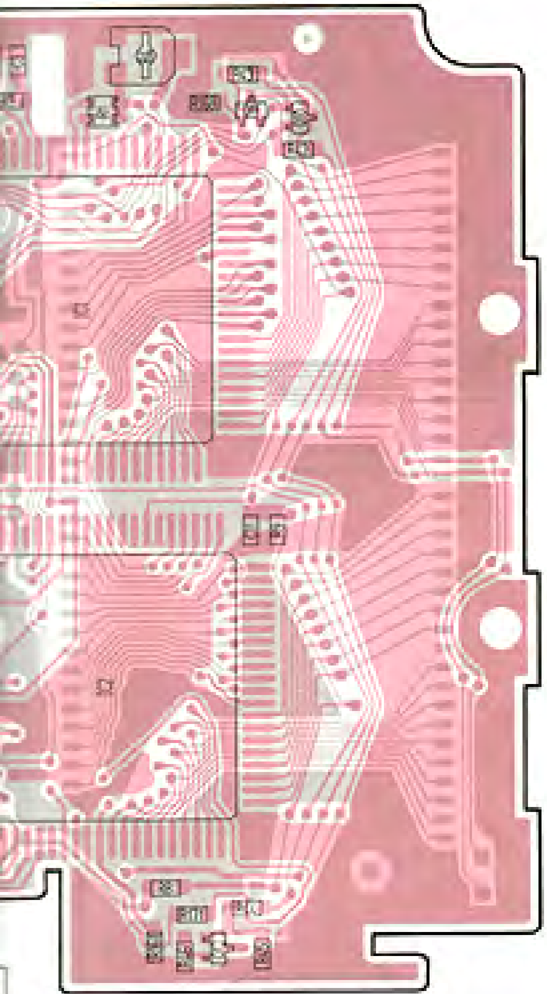


TC4SU69F
IC15, IC16, IC17

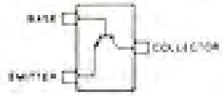


TC4S66F
IC18

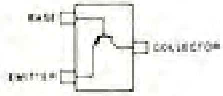




2SD2216-S
Q1, Q2, Q10, Q11, Q12, Q27, Q29, Q30

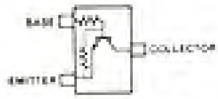


2SA1576R
Q3, Q28



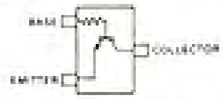
Symbol: FR

UN9211
Q5



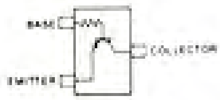
Symbol: 8A

UN9210
Q23, Q24, Q31, Q33



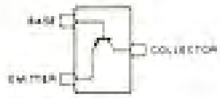
Symbol: 8L

UN9110
Q4, Q25, Q32

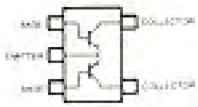


Symbol: 6L

2SB1462R
Q26

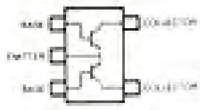


XP1210
Q18, Q19, Q20, Q21



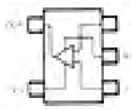
Symbol: AC

XP1501
Q13

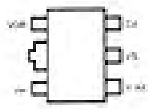


Symbol: 5R

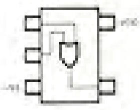
NJM2107F
IC6, IC7, IC20



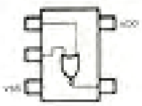
S-87050EF
IC11



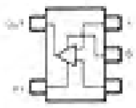
TC4S71F
IC10



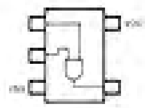
TC4S01F
IC19



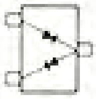
NJM2406F
IC8, IC9



TC4S81F
IC12

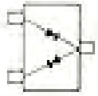


MA133
D3, D31, D33,
D34, D35, D37, D38



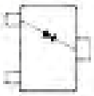
Symbol: MP

HSM88AS
D28, D29



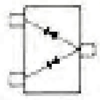
Symbol: C1

MA132K
D5
D15 (EUR-1, UK, AUS)



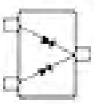
Symbol: MI

MA132WA
D6, D8, D9, D10,
D11, D12, D13, D14



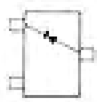
Symbol: MO

MA132WK
D15 (SEA)
D27, D30, D32



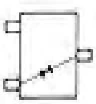
Symbol: MU

MA132A
D22, D26



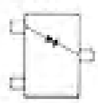
Symbol: MB

MA132HK
D15 (USA)
D16 (EUR-2, USA, AUS, SEA)
D18



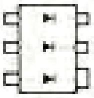
Symbol: M3N

1SS322
D25



Symbol: A9

MA1S121
D7



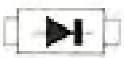
Symbol: M2D

MA728
D36

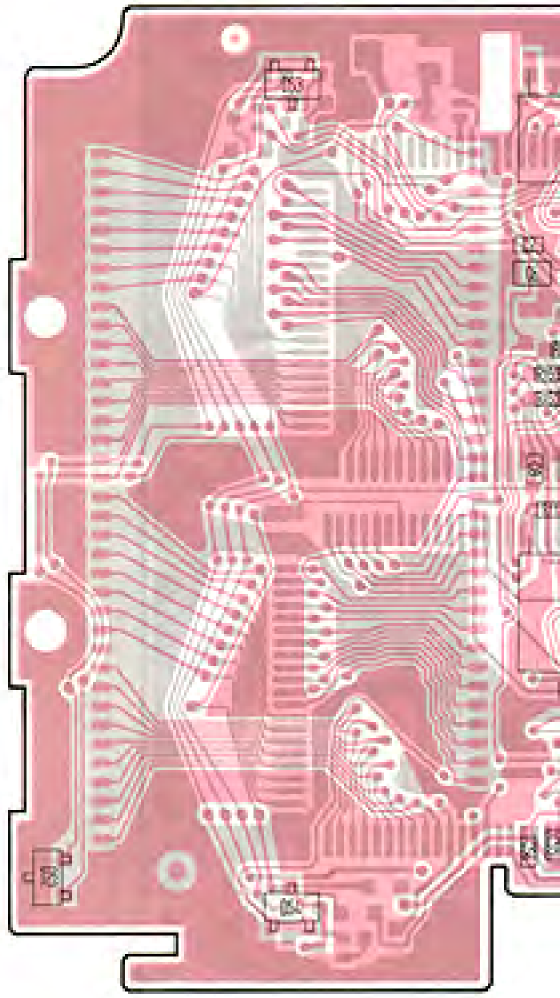


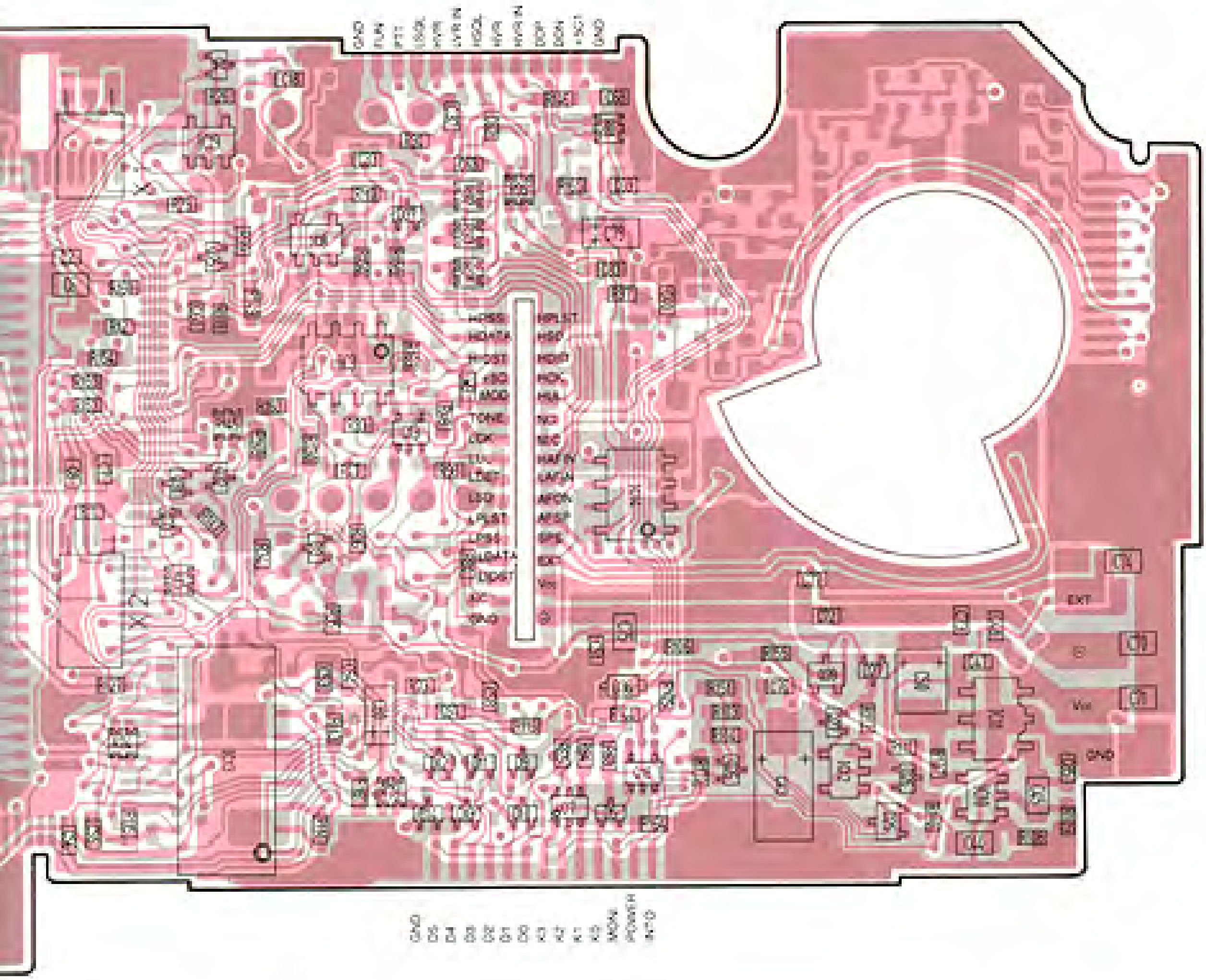
Symbol: 2A

MA110
D4

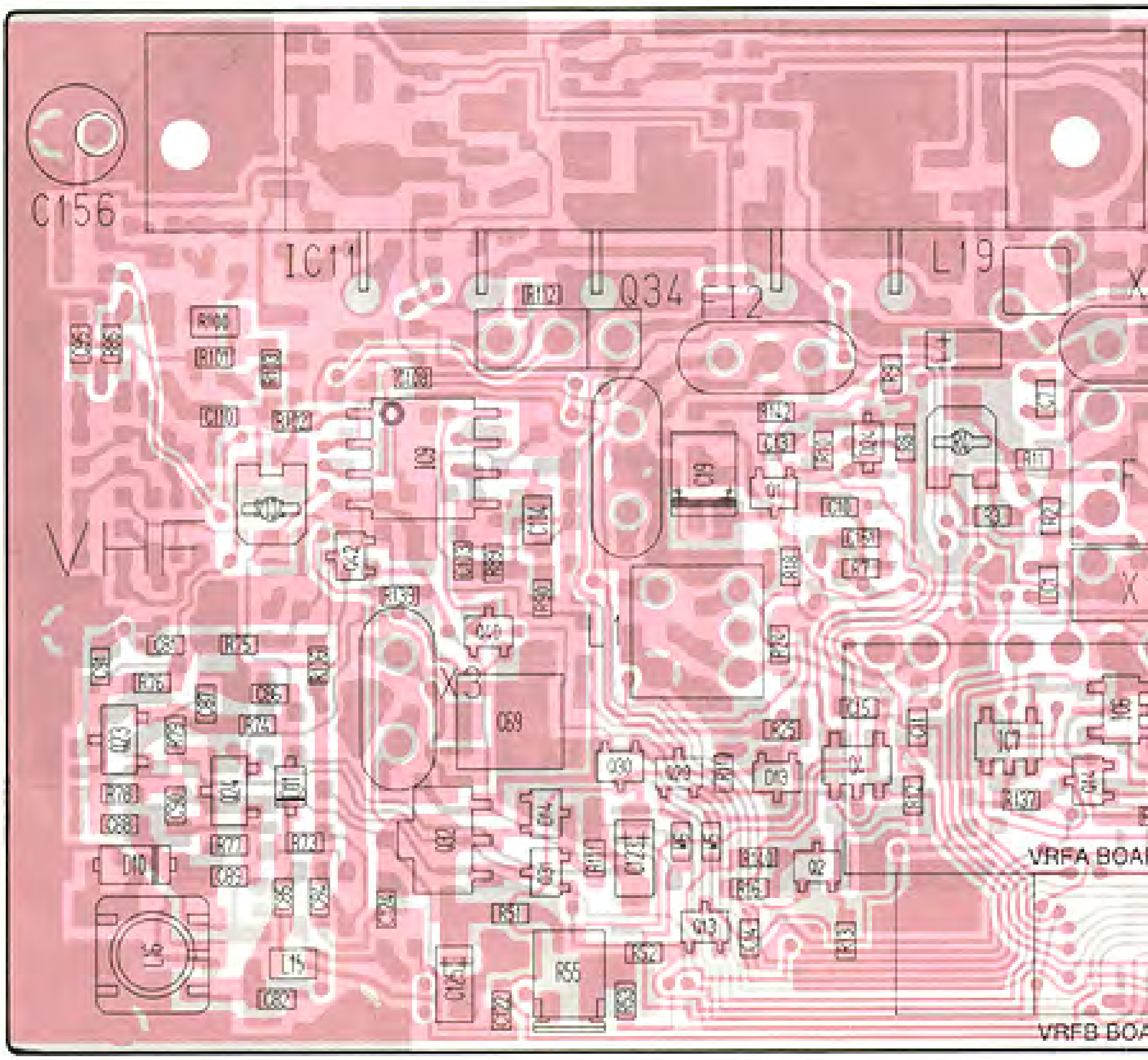


Symbol: 1A

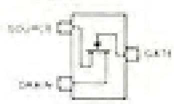




7-8 VHF RF UNIT

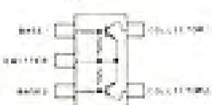


2SK880Y
Q21



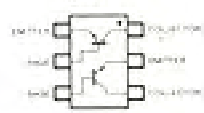
Symbol: XY

FMG2
Q4

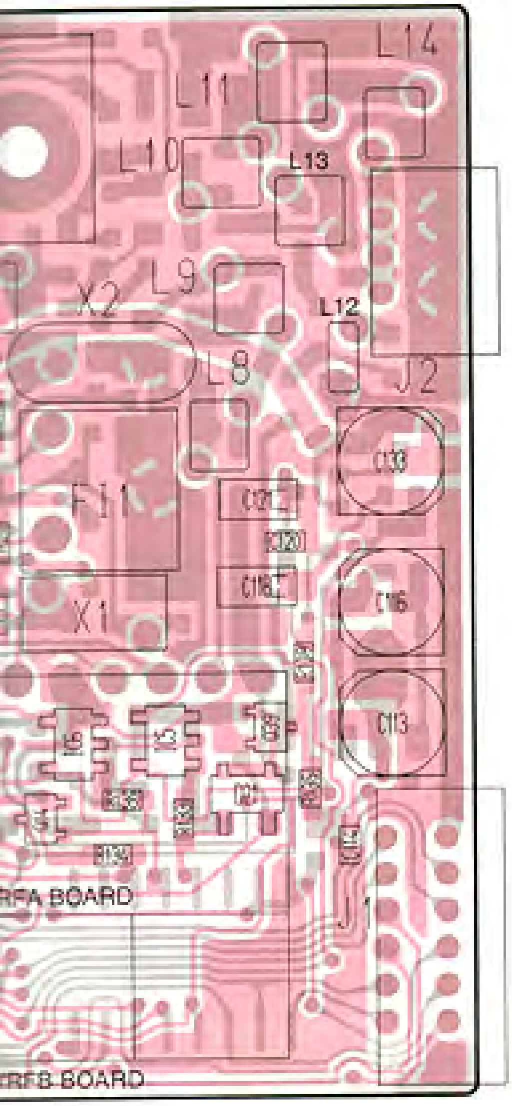


Symbol: G2

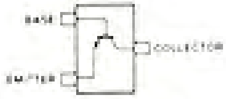
IMZ2
Q17



Symbol: Z2

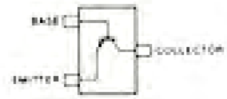


2SC3772
Q41



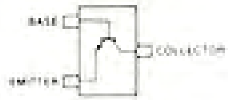
Symbol: LY3

2SA1576-R
Q38



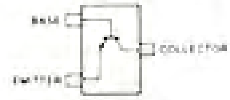
Symbol: FR

2SC4403
Q9, Q10, Q11



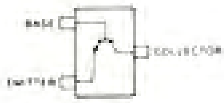
Symbol: LY3

2SC4081S
Q1, Q2, Q27, Q29
Q31, Q33, Q36, Q42



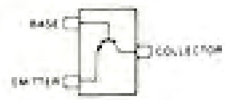
Symbol: BS

2SC3770
Q5



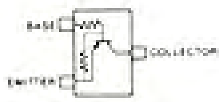
Symbol: JY3

2SC3356
Q23, Q24



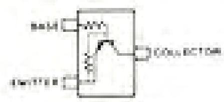
Symbol: R25

DTA144EU
Q40



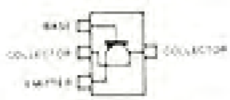
Symbol: 16

DTA144TU
Q13



Symbol: 96

2SB798
Q32, Q37

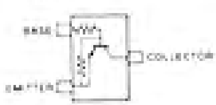


Symbol: DK

2SB909M
Q34

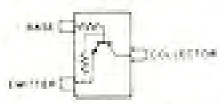


DTC144TU
Q16



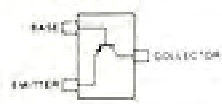
Symbol: 06

DTC144EU
Q14, Q39



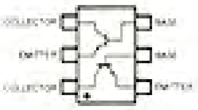
Symbol: 26

2SA1576-S
Q28, Q30



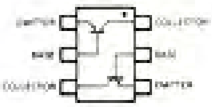
Symbol: FS

IMX5
Q25, Q26



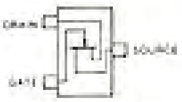
Symbol: X5

IMT1
Q22



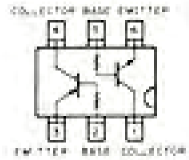
Symbol: T1

2SK882-Y
Q6



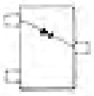
Symbol: TY

IMD6
Q15



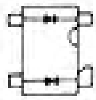
Symbol: D6

DA114
D12, D13, D14, D15



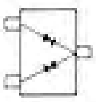
Symbol: AV

MA862
D9, D16, D23



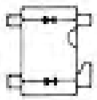
Symbol: M1I

1SV172
D22



Symbol: BE

DWA010
D21



Symbol: W8

MA333
D10

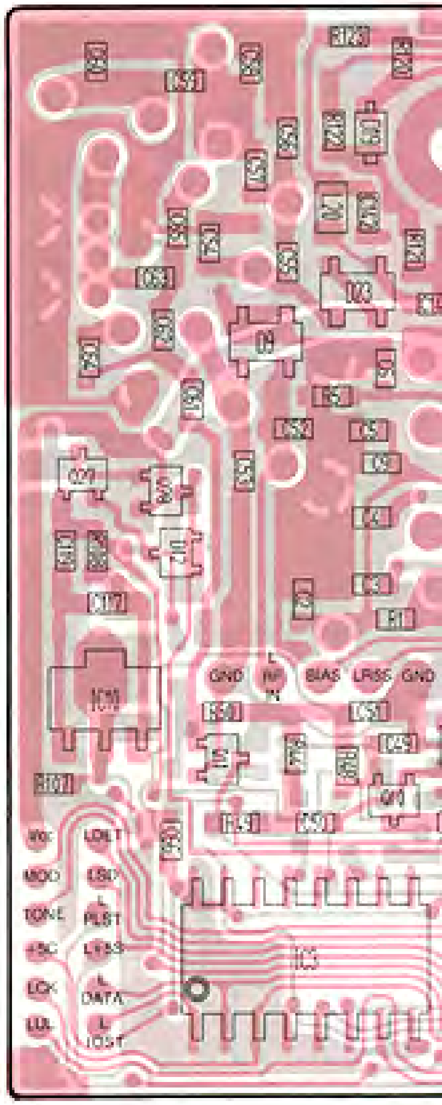


Symbol: 6C83

MA77
D11



Symbol: 4B



MA110
D17, D24



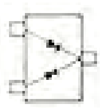
Symbol: 1A

MA728
D18, D19



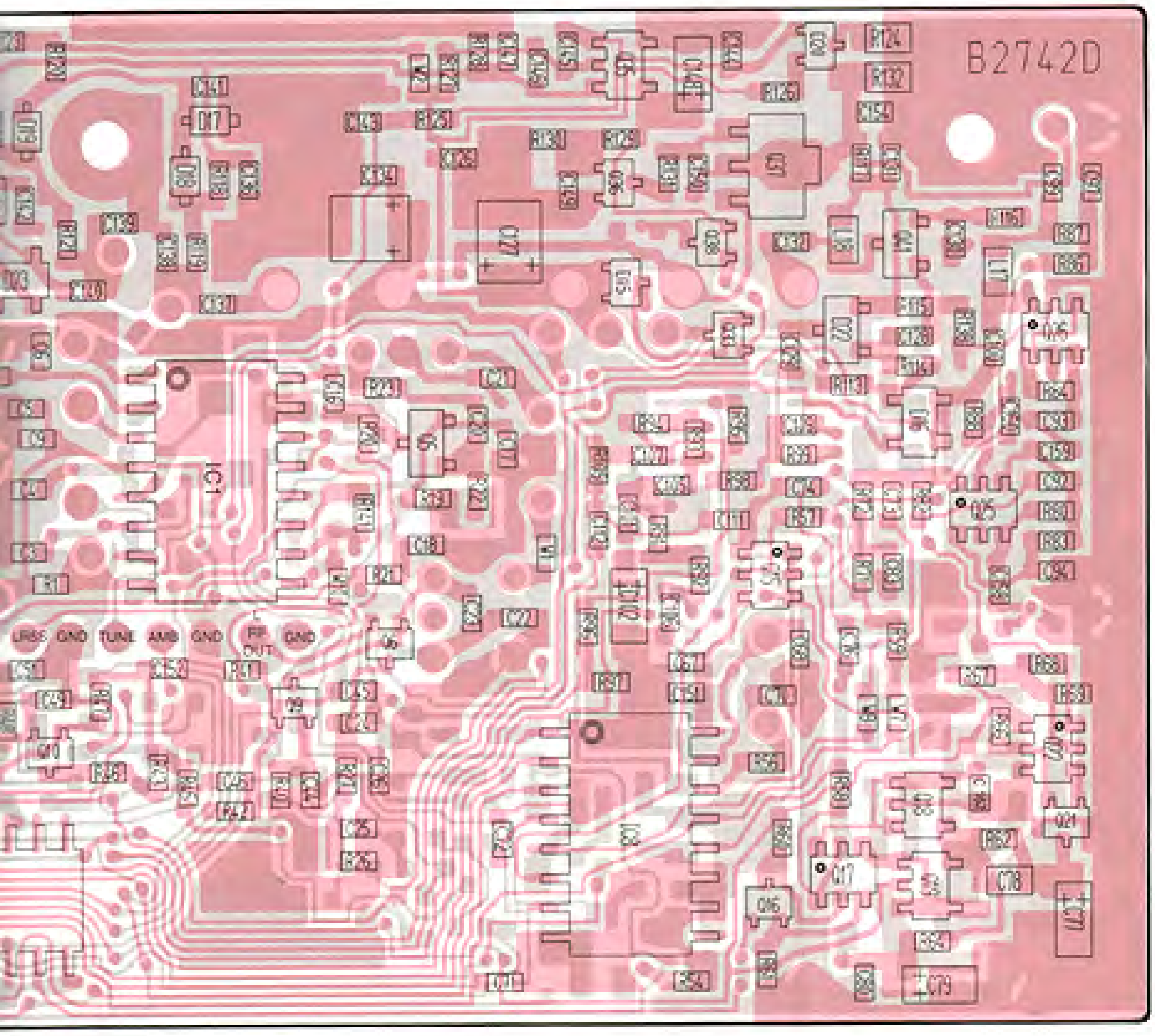
Symbol: 2A

DAN202U
D20

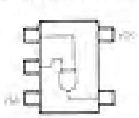


Symbol: N

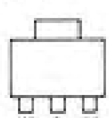
TC4
IC5



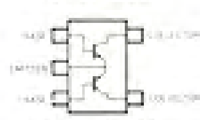
TC4S81F
IC5, IC6, IC7



S-81250HG
IC10

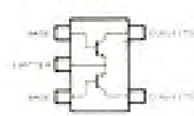


FMS1
Q19, Q35



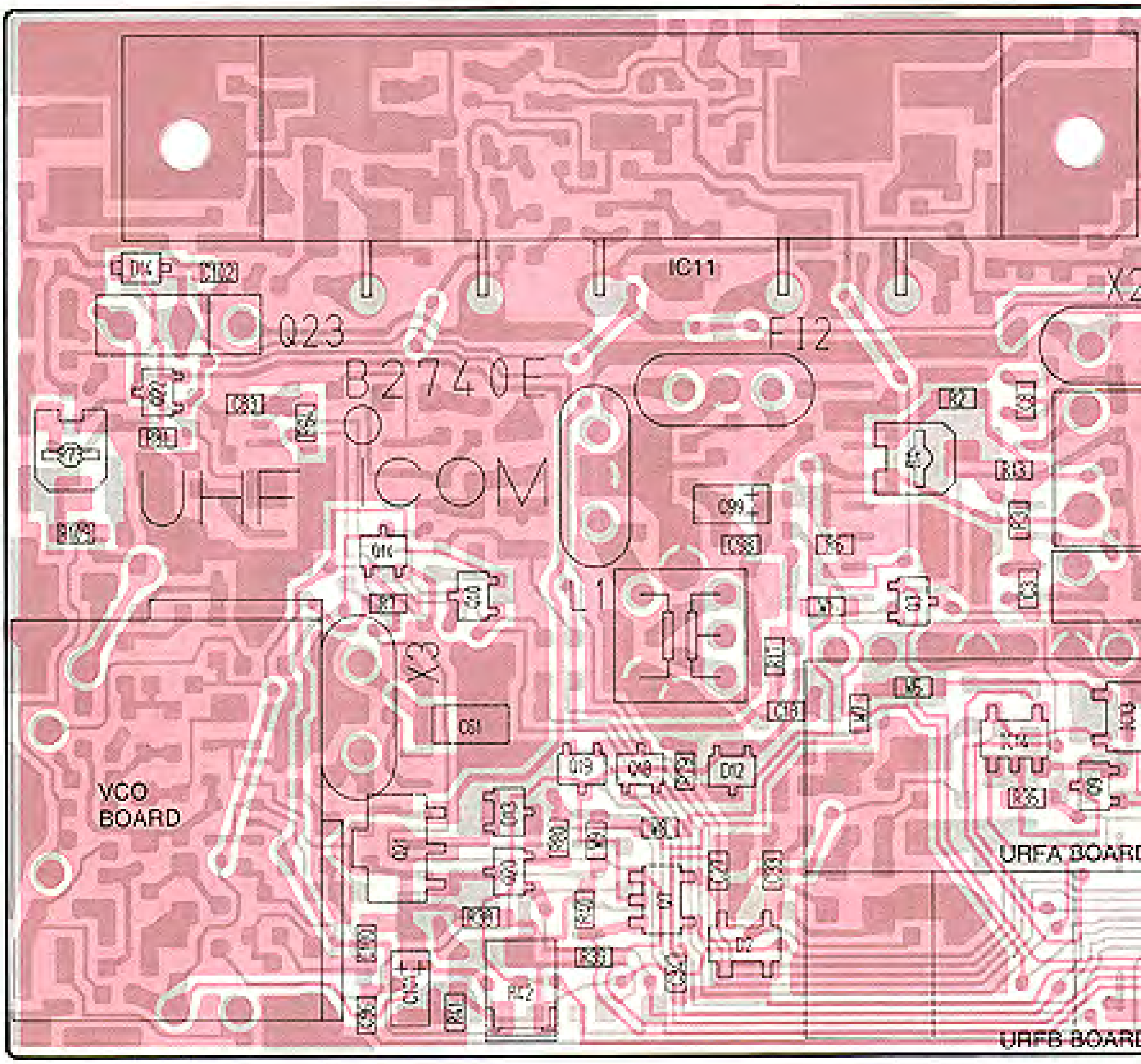
Symbol: S1

FMW1
Q18

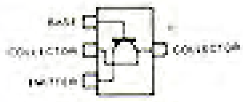


Symbol: W1

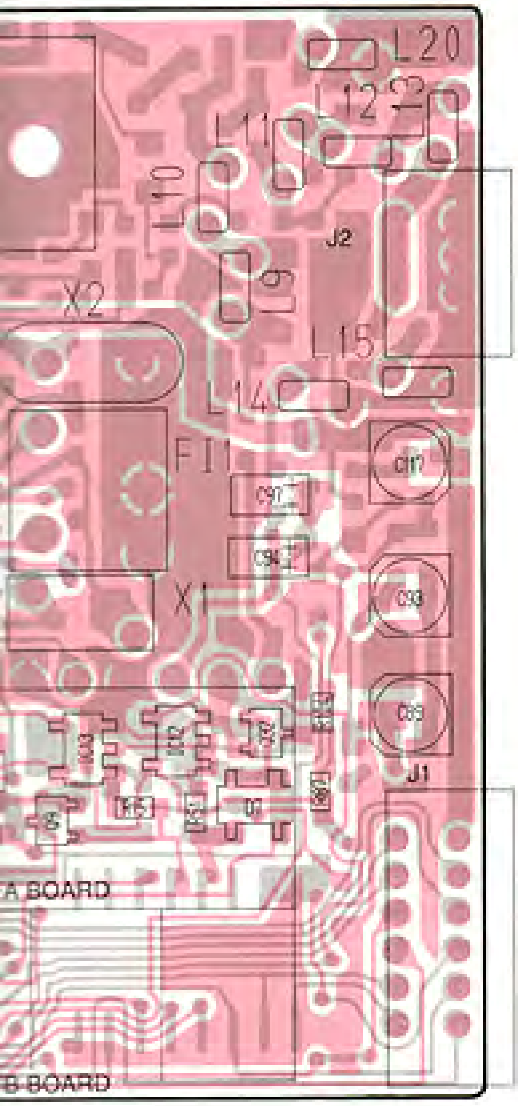
7-9 UHF RF UNIT



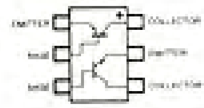
2SB798
Q21



Symbol: DK

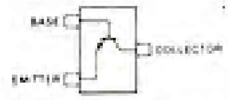


IMZ2
Q12



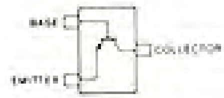
Symbol: Z2

2SC3583
Q6



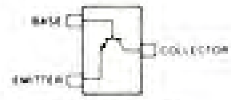
Symbol: R34

2SC3770
Q1



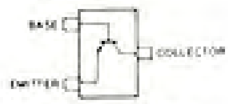
Symbol: JY3

2SC4081S
Q16, Q18, Q20
Q22, Q25



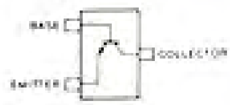
Symbol: BS

2SC4403
Q2, Q15, Q28
Q33, Q34



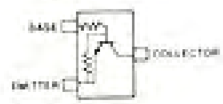
Symbol: LY3

2SC3356
Q27



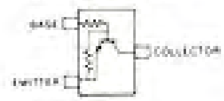
Symbol: R25

DTC144TU
Q11



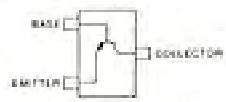
Symbol: 06

DTC144EU
Q9, Q30, Q32



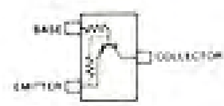
Symbol: 26

2SA1576 R/S
Q8, Q17, Q19, Q26



Symbol: FR/FS

DTA143ZU
Q29

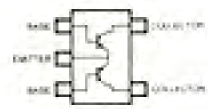


Symbol: 113

2SB909M
Q23

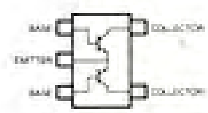


XP1401
Q13, Q24



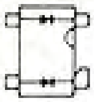
Symbol: 5V

XP1501
Q31



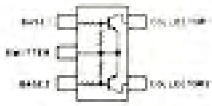
Symbol: 5R

MA862
D2, D3, D6,
D7, D9, D19



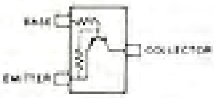
Symbol: M1I

FMA2
Q7



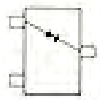
Symbol: A2

DTA144EU
Q3, Q10



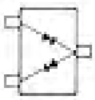
Symbol: 16

DA114
D12, D13



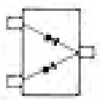
Symbol: AV

DA204U
D10



Symbol: K

DAN202U
D15



Symbol: N

MA728
D16, D18



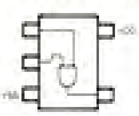
Symbol: 2A

MA77
D4, D20, D21, D22



Symbol: 4B

TC4S81F
IC12, IC13, IC14

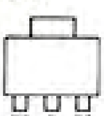


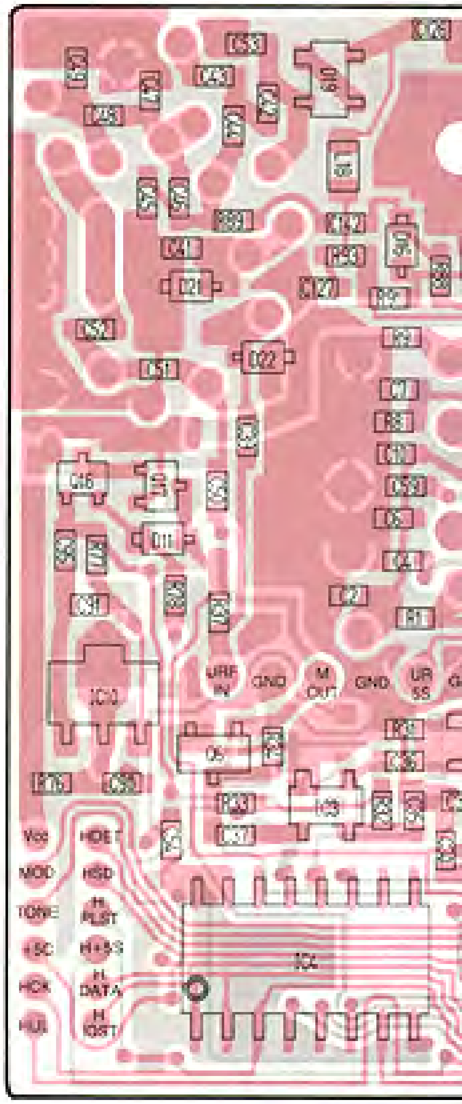
MA110
D11, D14, D17

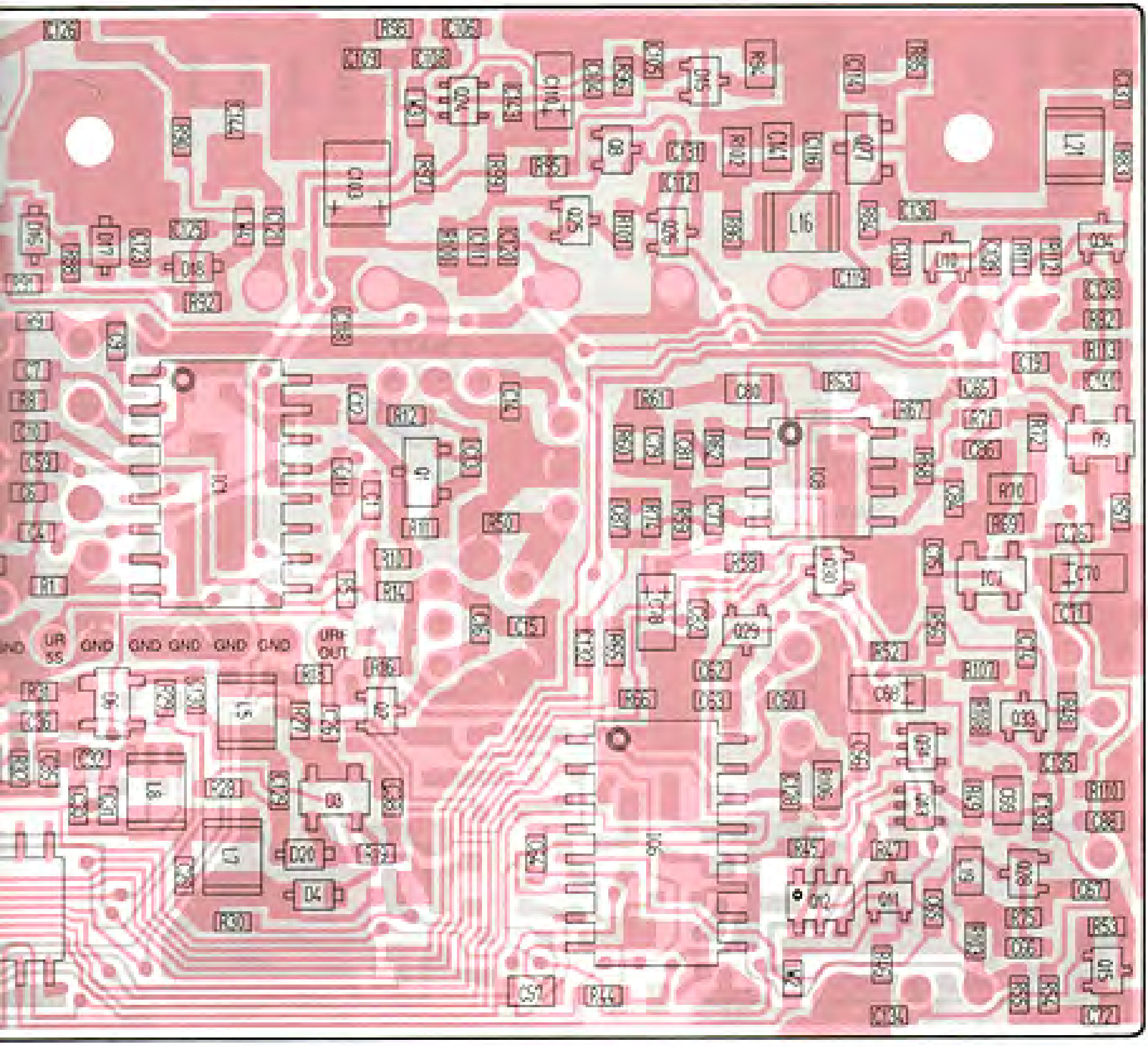


Symbol: 1A

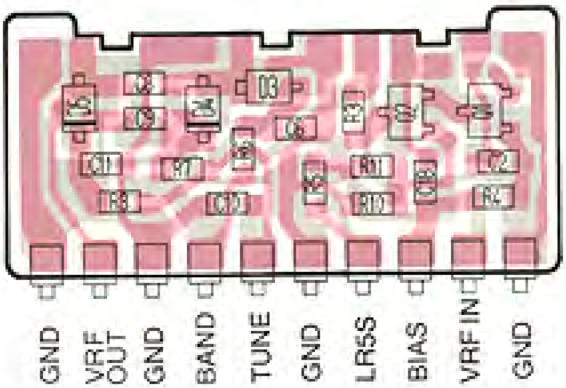
S-81250HG
IC10

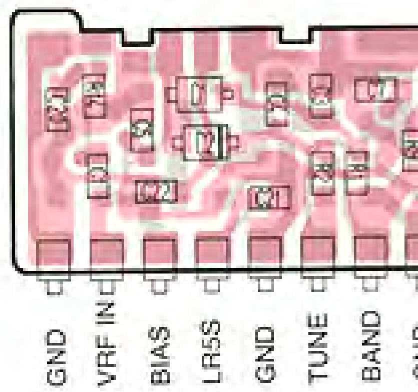




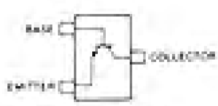

GND
UR SS
GND
GND
GND
GND
GND
URF OUT
L16
L21

7-10 VRF A UNIT



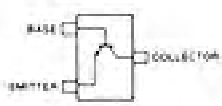


2SC4403
Q2



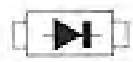
Symbol: LY3

2SC4405
Q1



Symbol: OY3

MA77
D1, D3, D6



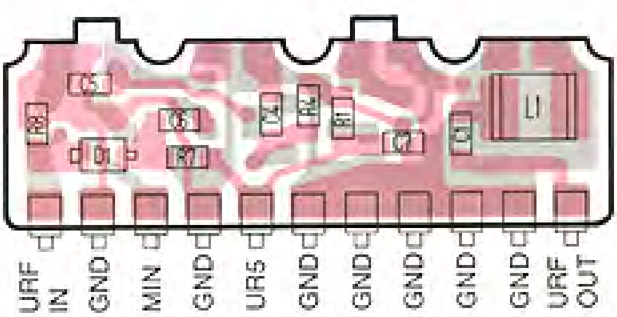
Symbol: 4B

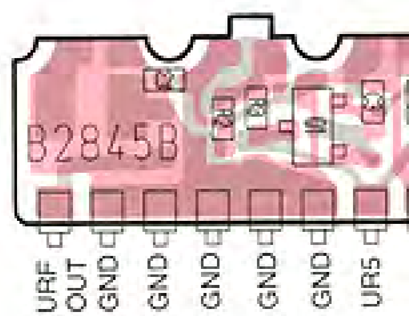
MA363B
D2, D4, D5



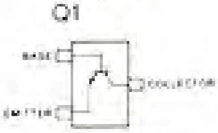
Symbol: 6D

7-12 URF A UNIT





2SC3583
Q1



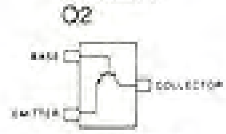
Symbol: R34

MA77
D1, D2



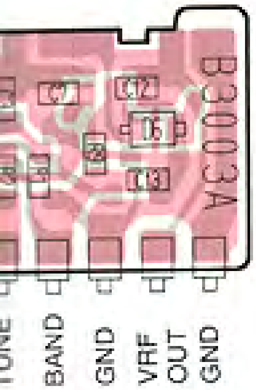
Symbol: 4B

2SC3585
Q2



Symbol: R42

7-11 VRF B UNIT



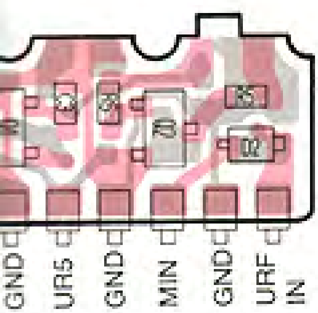


A363B
2, D4, D5



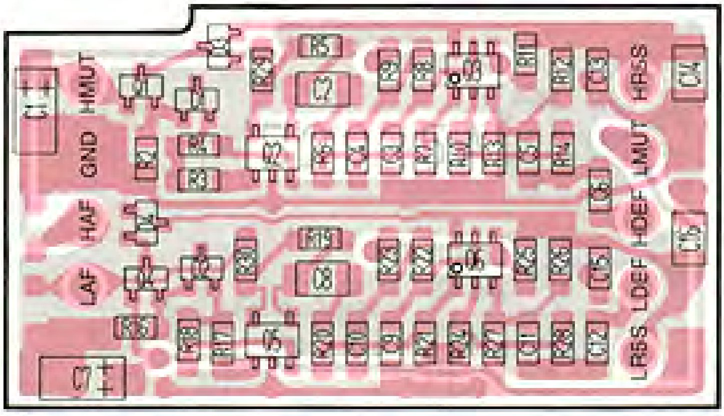
ymbol: 6D

7-13 URF B UNIT

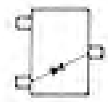




7-14 AF FIL UNIT

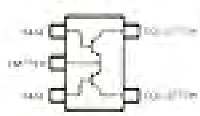


MA132HK
D3



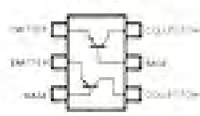
Symbol: M3N

XP1501
Q2, Q5



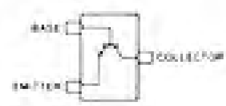
Symbol: 5R

XP6501
Q3, Q6

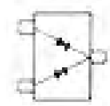


Symbol: 5H

2SD2216
Q1, Q4

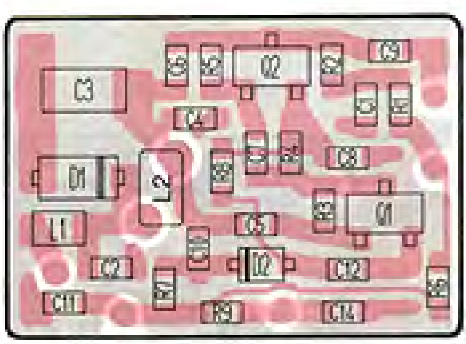


MA133
D1, D2, D4

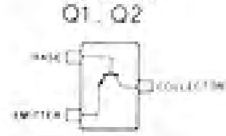


Symbol: MP

7-15 U VCO UNIT

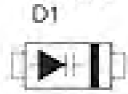


2SC3356
Q1, Q2



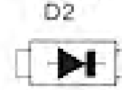
Symbol: R25

MA333
D1



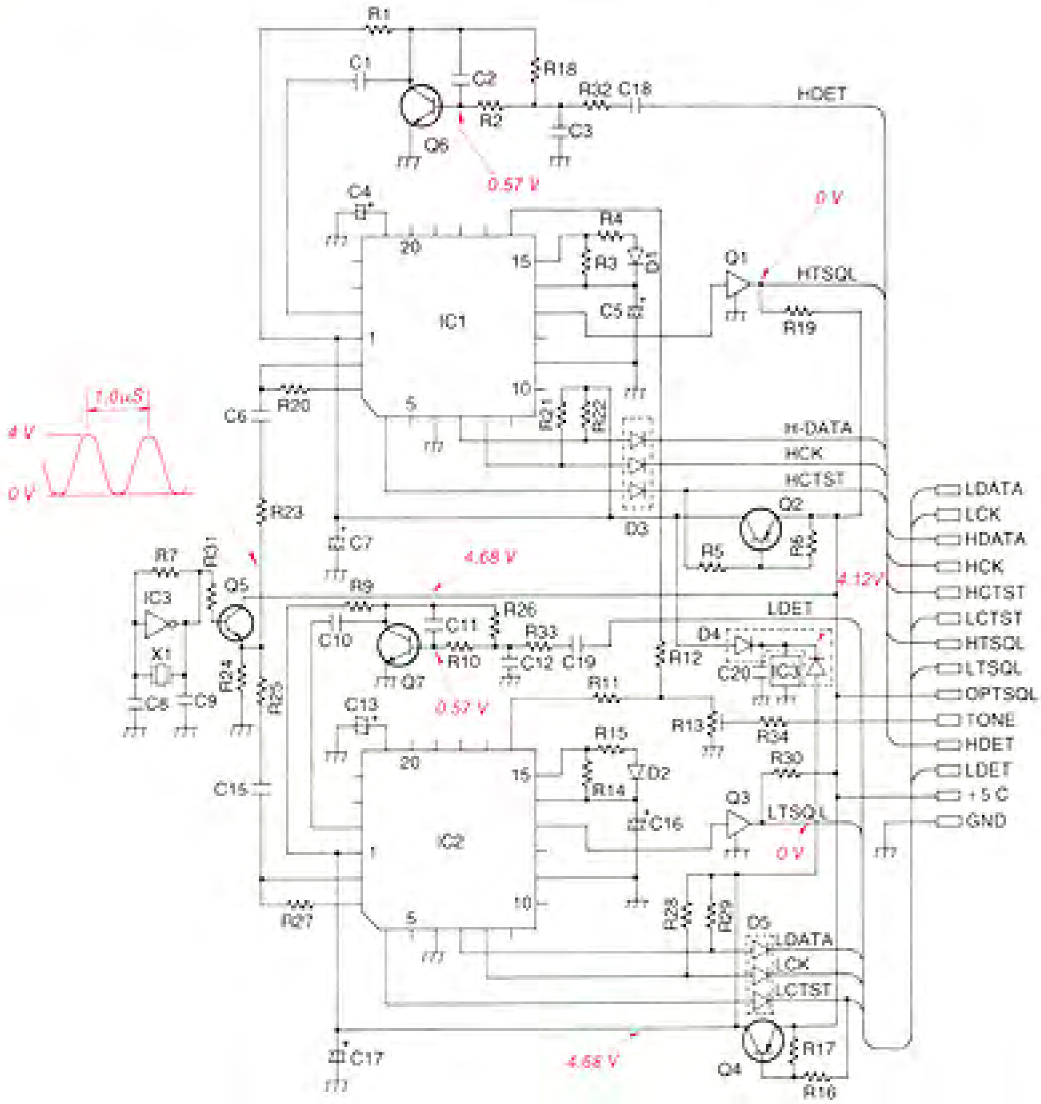
Symbol: MP

MA77
D2

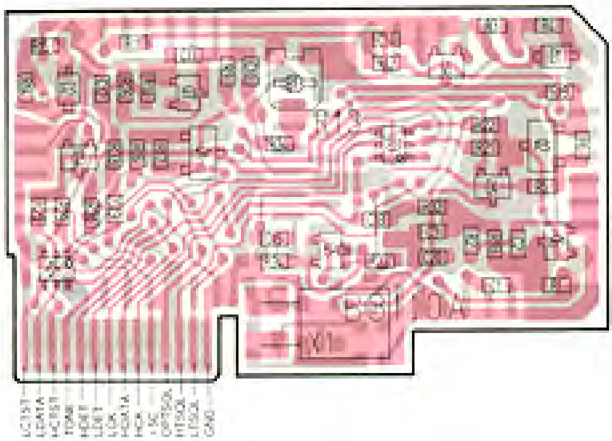


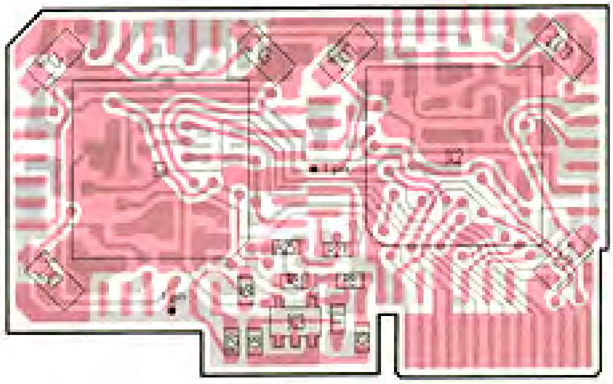
Symbol: 4B

8-1 UT-63 TONE SQUELCH UNIT

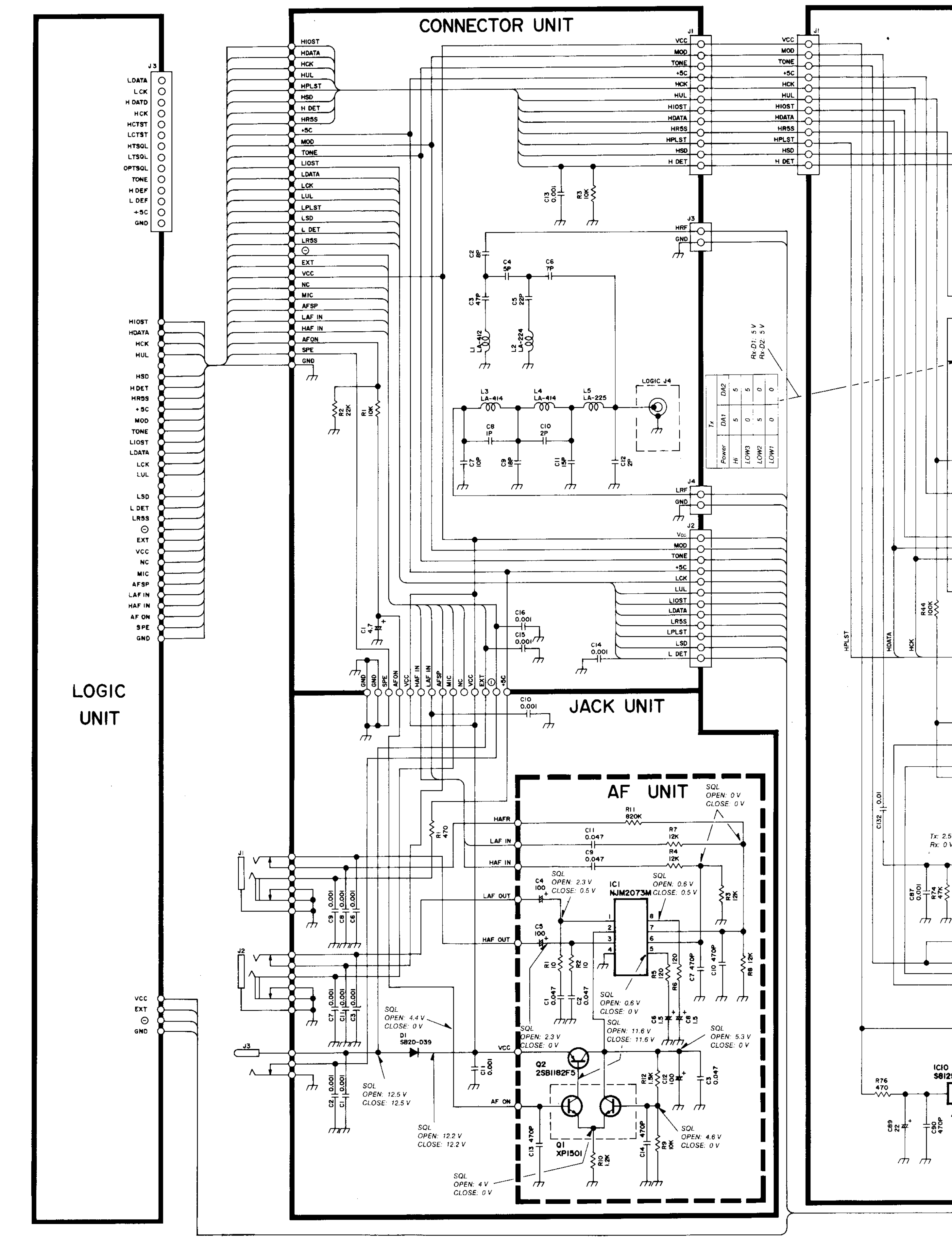


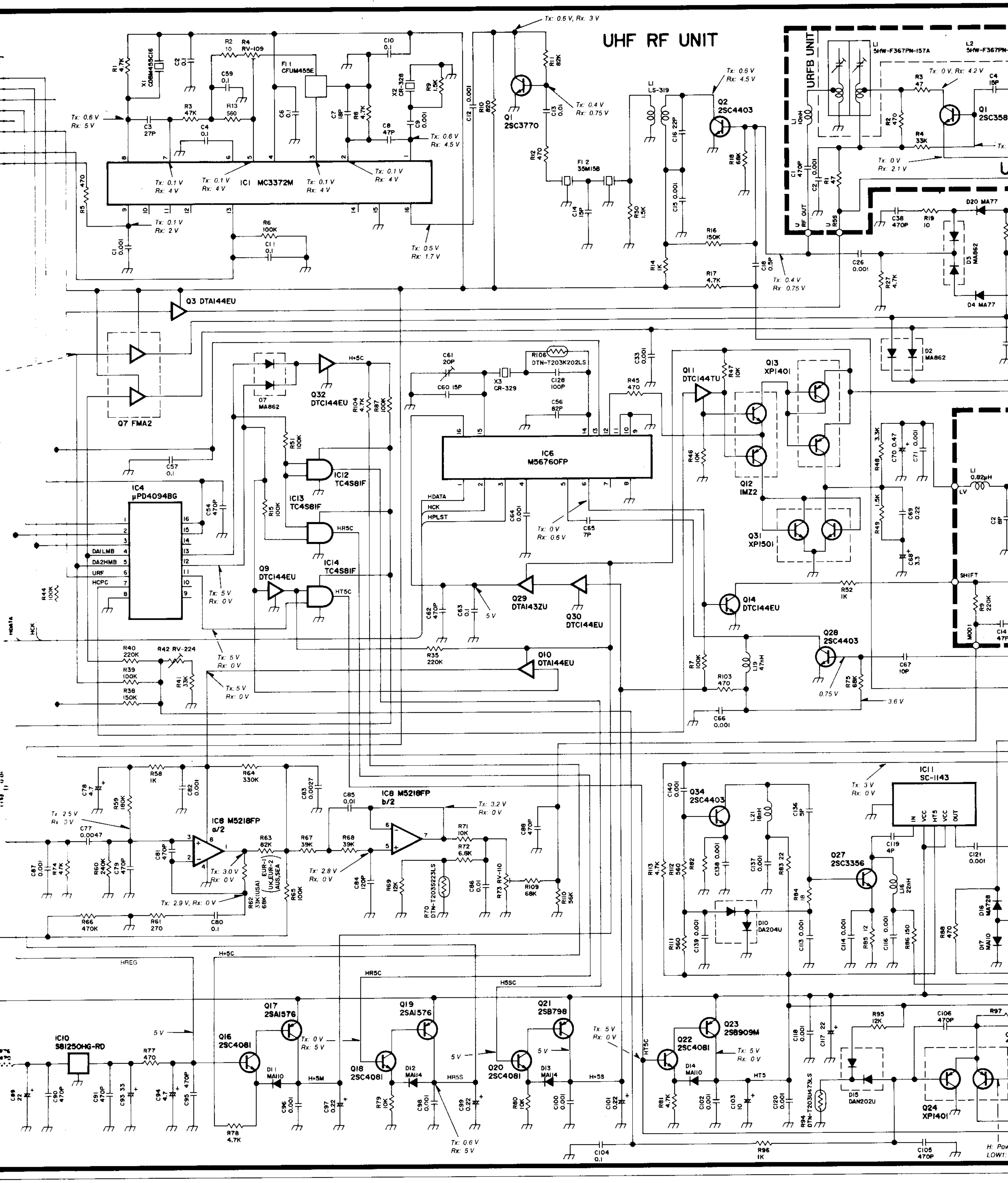
•BOARD LAYOUTS



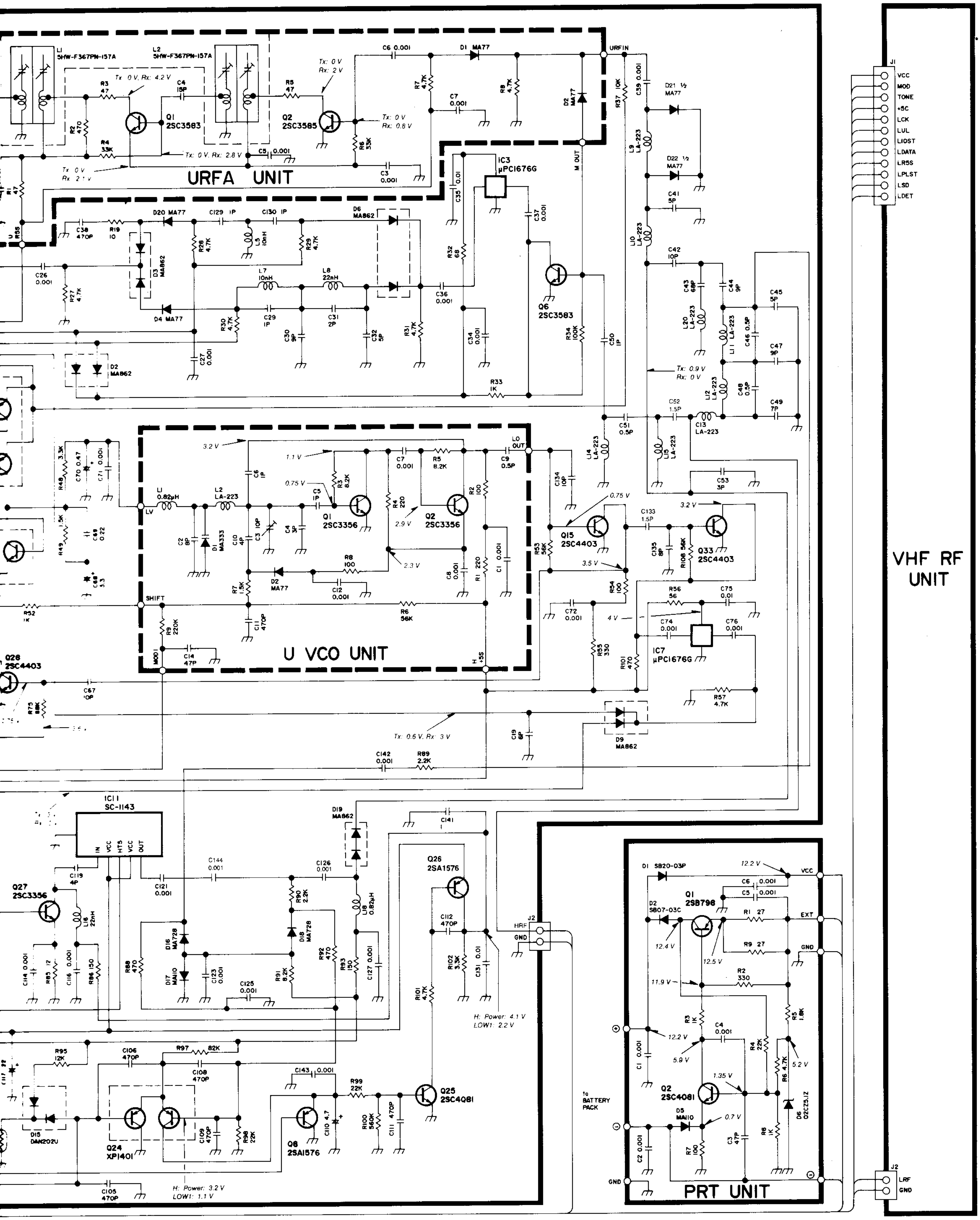


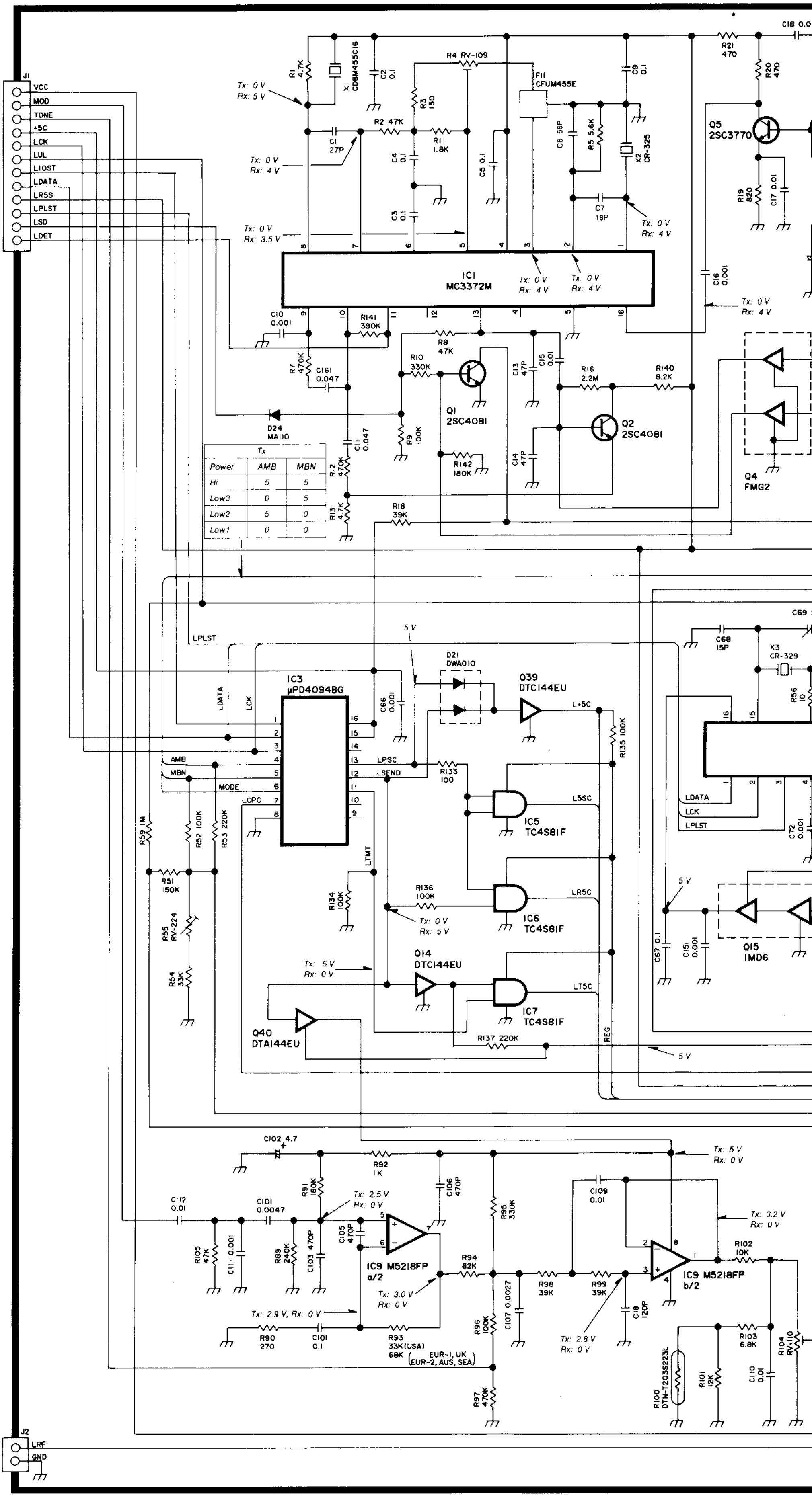
SECTION 9 VOLTAGE DIAGRAM



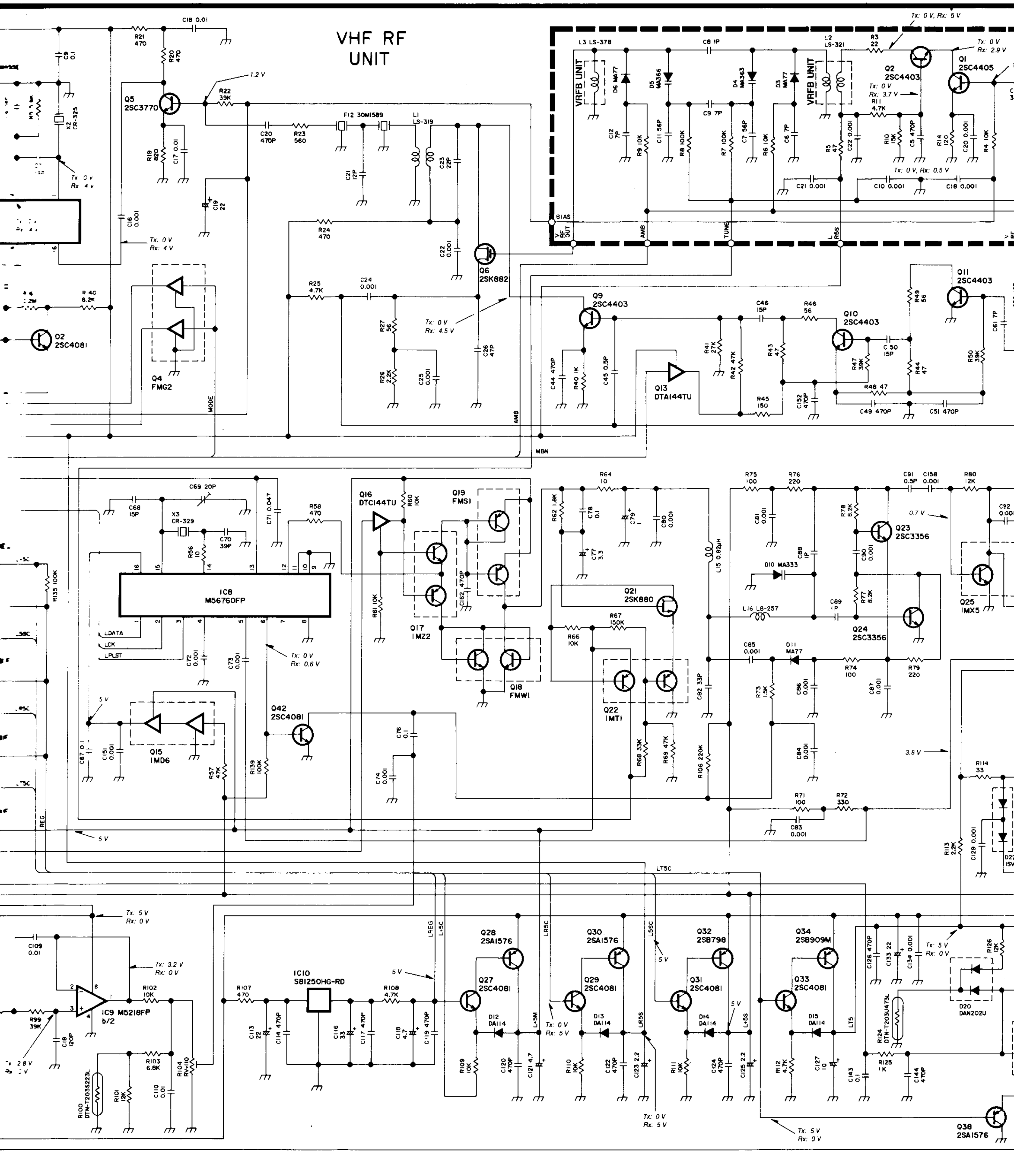


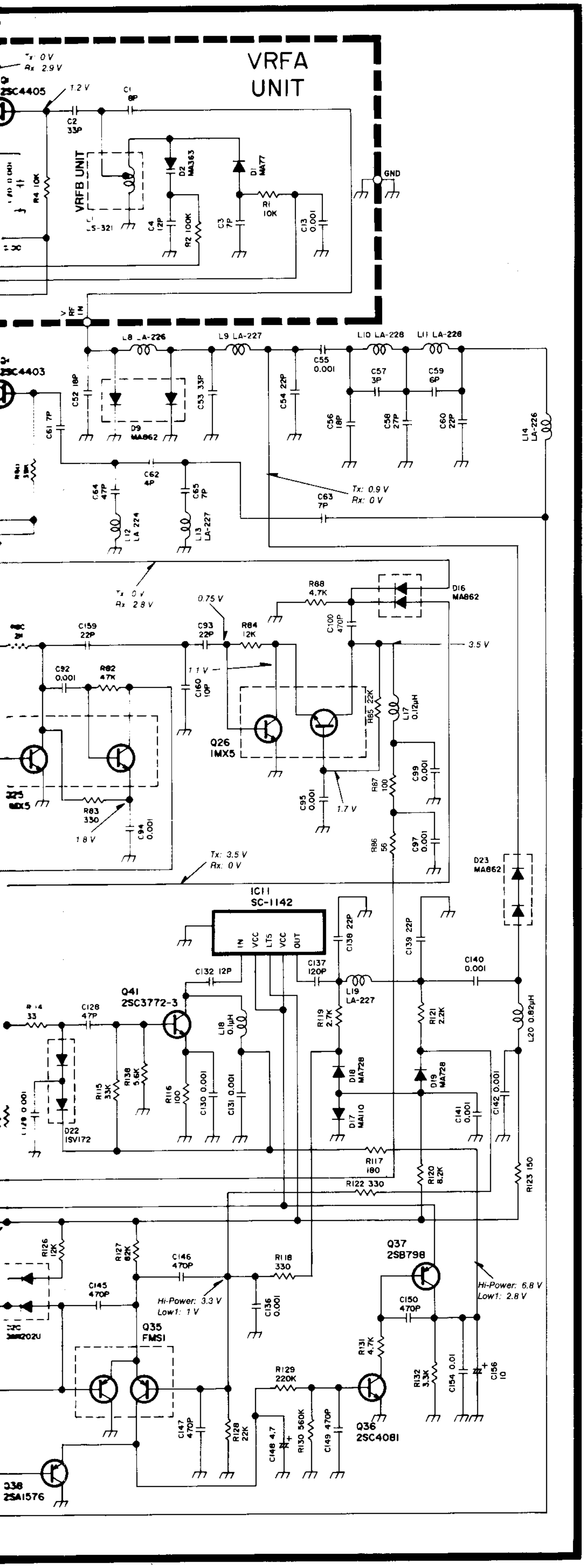
UHF RF UNIT
URFB UNIT
IC1 MC3372M
IC4 μPD4094BG
IC6 M56760FP
IC8 M5218FP a/2
IC8 M5218FP b/2
IC10 S81250HG-RD
IC11 SC-1143
IC12 TC4S81F
IC13 TC4S81F
IC14 TC4S81F
Q1 2SC3770
Q2 2SC4403
Q3 DTA144EU
Q7 FMA2
Q9 DTC144EU
Q10 DTA144EU
Q11 DTC144TU
Q12 IMZ2
Q13 XP1401
Q14 DTC144EU
Q16 2SC4081
Q17 2SA1576
Q18 2SC4081
Q19 2SA1576
Q20 2SC4081
Q21 2SB798
Q22 2SC4081
Q23 2SB909M
Q24 XP1401
Q27 2SC3356
Q28 2SC4403
Q29 DTA143ZU
Q30 DTC144EU
Q31 XP1501
Q32 DTC144EU
Q34 2SC4403
D2 MA862
D3 MA862
D4 MA77
D7 MA862
D10 DA204U
D11 MA110
D12 MA114
D13 MA114
D14 MA110
D15 DAN202U
D16 MA728
D17 MA110
D20 MA77
FI1 CFUM455E
FI2 35M15B
X1 CDBM455C16
X2 CR-328
X3 CR-329
L1 LS-319
L1 5HW-F367PN-157A
L2 5HW-F367PN-
R106 DTN-T203K202LS
R70 DTN-T203S223LS
R94 DTN-T203U473LS
HDATA
HCK
HPLST
DA1LMB
DA2HMB
URF
HCPC
H+5C
HR5C
HT5C
H5SC
HREG
H+5M
HR5S
H+5S
HT5
LV
SHIFT
MOD1
U RF OUT
U R5S
Tx: 0.6 V, Rx: 3 V
Tx: 0.6 V
Rx: 5 V
Tx: 0.1 V
Rx: 4 V
Tx: 0.1 V
Rx: 2 V
Tx: 0.5 V
Rx: 1.7 V
Tx: 0.4 V
Rx: 0.75 V
Tx: 0.6 V
Rx: 4.5 V
Tx: 0 V, Rx: 4.2 V
Tx: 0 V
Rx: 2.1 V
Tx: 5 V
Rx: 0 V
Tx: 3.2 V
Rx: 0 V
Tx: 3.0 V
Rx: 0 V
Tx: 2.9 V, Rx: 0 V
Tx: 2.8 V
Rx: 0 V
Tx: 2.5 V
Rx: 0 V
Tx: 3 V
Rx: 0 V
Tx: 0.6 V
Rx: 5 V
0.75 V
3.6 V
5 V
R62 33K(USA) 68K(UK,EUR-1,EUR-2,AUS,SEA)
H: Pow
LOW1:

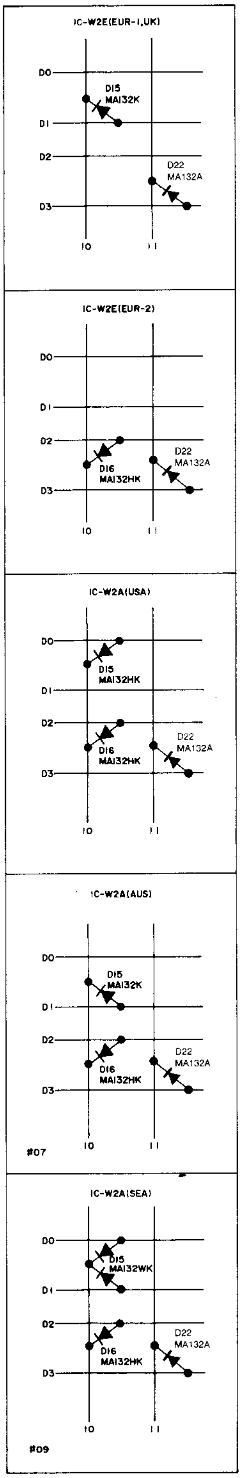

URFA UNIT
U VCO UNIT
PRT UNIT
VHF RF UNIT
L1 SHW-F367PN-157A
L2 SHW-F367PN-157A
Q1 2SC3583
Q2 2SC3585
D1 MA77
D2 MA77
URFIN
M OUT
IC3 μPC1676G
Q6 2SC3583
D6 MA862
D3 MA862
D20 MA77
D4 MA77
D2 MA862
Q1 2SC3356
Q2 2SC3356
D1 MA333
LO OUT
LV
SHIFT
MOD
+5S
Q15 2SC4403
Q33 2SC4403
IC7 μPC1676G
D9 MA862
D21 ½ MA77
D22 ½ MA77
Q28 2SC4403
IC11 SC-1143
Q27 2SC3356
D19 MA862
Q26 2SA1576
D16 MA728
D17 MA110
D18 MA728
Q24 XP1401
Q8 2SA1576
Q25 2SC4081
D15 DAN202U
H: Power: 4.1 V
LOW1: 2.2 V
H: Power: 3.2 V
LOW1: 1.1 V
Tx: 0.6 V, Rx: 3 V
Tx: 0.9 V
Rx: 0 V
HRF
GND
J1
VCC
MOD
TONE
+5C
LCK
LUL
LIOST
LDATA
LR5S
LPLST
LSD
LDET
J2
LRF
GND
D1 SB20-03P
D2 SB07-03C
Q1 2SB798
Q2 2SC4081
D5 MA110
D6 02CZ5.1Z
VCC
EXT
GND
to BATTERY PACK

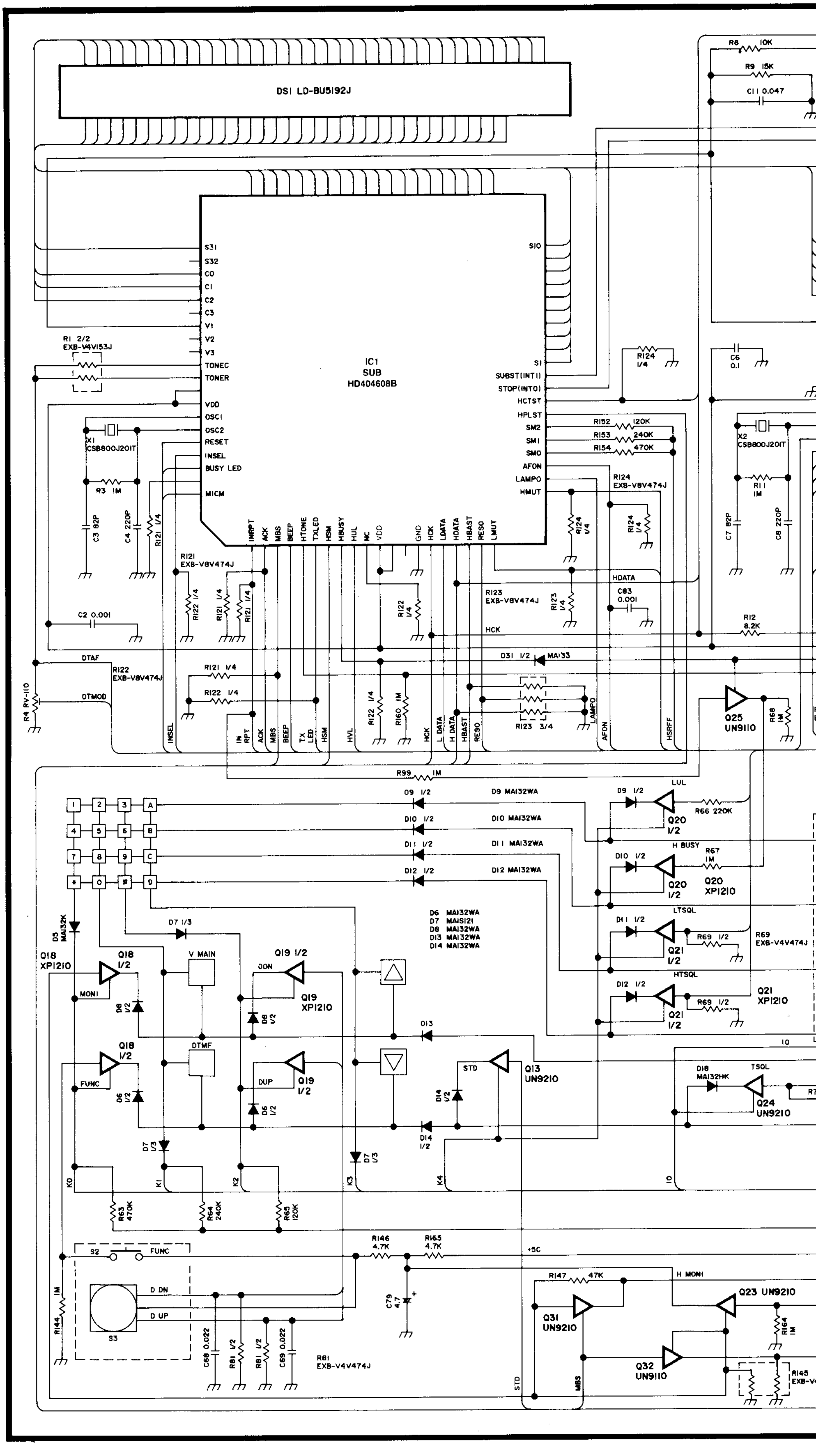


Tx		
Power	AMB	MBN
Hi	5	5
Low3	0	5
Low2	5	0
Low1	0	0

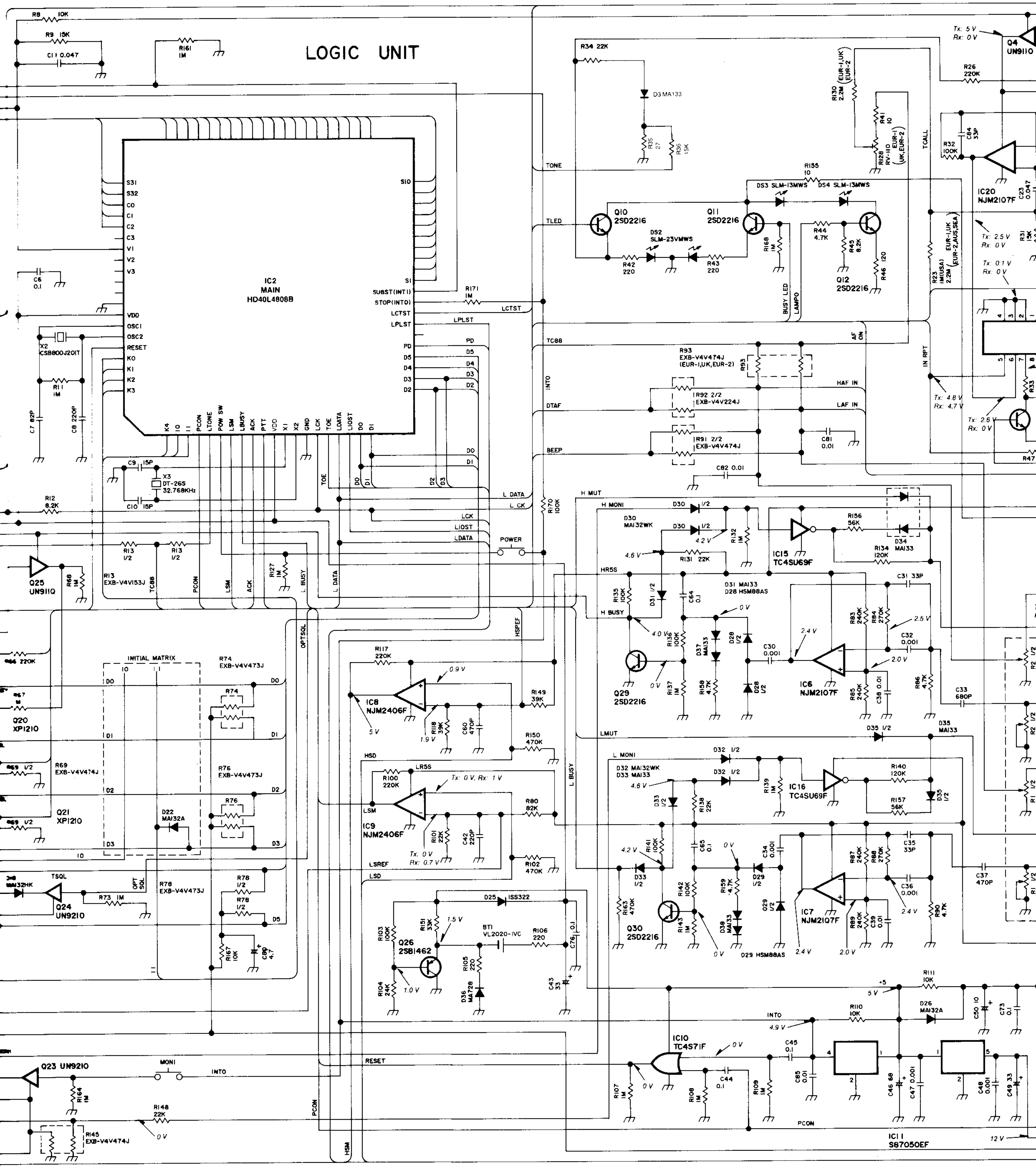

VHF RF UNIT
VRFB UNIT
L3 LS-378
C8 1P
L2 LS-321
R3 22
Tx: 0 V, Rx: 5 V
Tx: 0 V
Rx: 2.9 V
Q2 2SC4403
Q1 2SC4405
Tx: 0 V
Rx: 3.7 V
R11 4.7K
D6 MA77
D5 MA366
D4 MA363
D3 MA77
C9 7P
C12 7P
R9 10K
C11 56P
R8 100K
R7 100K
C7 56P
R6 10K
C6 7P
R5 47
C22 0.001
R10 15K
C5 470P
R14 120
C20 0.001
R4 10K
Tx: 0 V, Rx: 0.5 V
C21 0.001
C10 0.001
C18 0.001
BIAS
V RF OUT
AMB
TUNE
L R5S
V RF
R21 470
C18 0.01
C9 0.1
R20 470
1.2 V
Q5 2SC3770
R22 39K
X2 CR-325
Tx: 0 V
Rx: 4 V
F12 30M1589
L1 LS-319
C20 470P
R23 560
R19 820
C17 0.01
C21 12P
C23 22P
C19 22
C16 0.001
Tx: 0 V
Rx: 4 V
R24 470
C22 0.001
Q6 2SK882
R40 8.2K
Q4 FMG2
Q2 2SC4081
R25 4.7K
C24 0.001
R27 56
R26 2.2K
C25 0.001
Tx: 0 V
Rx: 4.5 V
C26 47P
MODE
AMB
MBN
Q9 2SC4403
C44 470P
R40 1K
C45 0.5P
Q13 DTA144TU
C46 15P
R46 56
R41 27K
R42 47K
R43 47
Q10 2SC4403
C50 15P
R47 39K
R45 150
C152 470P
R48 47
C49 470P
C51 470P
Q11 2SC4403
R49 56
C61 7P
R44 47
R50 39K
C69 20P
C68 15P
X3 CR-329
C71 0.047
R58 470
R56 10
C70 39P
IC8 M56760FP
LDATA
LCK
LPLST
C72 0.001
C73 0.01
Tx: 0 V
Rx: 0.6 V
R135 100K
Q16 DTC144TU
R60 10K
Q19 FMS1
R61 10K
C162 470P
Q17 IMZ2
Q18 FMW1
R64 10
R62 1.8K
C78 0.1
C79 1
C80 0.001
C77 3.3
Q21 2SK880
R67 150K
R66 10K
Q22 IMT1
R68 33K
R69 47K
L15 0.82µH
R75 100
R76 220
C81 0.001
C88 1P
D10 MA333
L16 L8-257
C89 1P
R78 8.2K
C90 0.001
R77 8.2K
Q23 2SC3356
Q24 2SC3356
C91 0.5P
C158 0.001
R80 12K
C92 0.001
0.7 V
Q25 IMX5
C85 0.001
D11 MA77
R74 100
R79 220
C82 33P
R73 1.5K
C86 0.001
C87 0.001
C84 0.001
R106 220K
3.8 V
R114 33
R71 100
R72 330
C83 0.001
R113 2.2K
C129 0.001
D22 1SV
5 V
C67 0.1
C151 0.001
Q15 IMD6
R57 47K
R139 100K
Q42 2SC4081
C76 0.1
C74 0.001
REG
5 V
LT5C
Tx: 5 V
Rx: 0 V
C109 0.01
Tx: 3.2 V
Rx: 0 V
R102 10K
IC9 M5218FP b/2
R99 39K
C18 120P
R103 6.8K
R104 RV110
C110 0.01
R101 12K
R100 DTN-T2035223L
2.8 V
R107 470
C113 22
C114 470P
IC10 S81250HG-RD
C116 33
C117 470P
R108 4.7K
C118 4.7
C119 470P
5 V
LREG
L-5C
Q28 2SA1576
Q27 2SC4081
D12 DA114
R109 10K
C120 470P
C121 4.7
L-5M
LR5C
Q30 2SA1576
Q29 2SC4081
Tx: 0 V
Rx: 5 V
D13 DA114
R110 10K
C122 470P
C123 2.2
LR5S
Tx: 0 V
Rx: 5 V
L5SC
5 V
Q32 2SB798
Q31 2SC4081
D14 DA114
5 V
L-5S
R111 10K
C124 470P
C125 2.2
Q34 2SB909M
Q33 2SC4081
D15 DA114
LT5
R112 4.7K
C127 10
C126 470P
C133 22
C134 0.001
Tx: 5 V
Rx: 0 V
R126 12K
D20 DAN202U
R124 DTN-T203U473L
R125 1K
C143 0.1
C144 470P
Tx: 5 V
Rx: 0 V
Q38 2SA1576


VRFA UNIT
VRFB UNIT
Tx: 0 V Rx: 2.9 V
2SC4405
1.2 V
C1 8P
C2 33P
D2 MA363
D1 MA77
GND
R1 10K
C3 7P
C4 12P
R2 100K
C13 0.001
R4 10K
LS-321
RF IN
L8 LA-226
L9 LA-227
L10 LA-228
L11 LA-228
2SC4403
C52 18P
C53 33P
C54 22P
C55 0.001
C57 3P
C59 6P
C56 18P
C58 27P
C60 22P
D9 MA862
C61 7P
L14 LA-226
C62 4P
C64 47P
C65 7P
L12 LA 224
L13 LA-227
C63 7P
Tx: 0.9 V Rx: 0 V
Tx: 0 V Rx: 2.8 V
0.75 V
R88 4.7K
D16 MA862
C159 22P
C93 22P
R84 12K
C100 470P
3.5 V
C92 0.001
R82 47K
1.1 V
C160 10P
R85 22K
L17 0.12μH
Q26 IMX5
C99 0.001
R87 100
C95 0.001
1.7 V
R83 330
1.8 V
C94 0.001
R86 56
C97 0.001
Tx: 3.5 V Rx: 0 V
D23 MA862
IC11 SC-1142
IN VCC LT5 VCC OUT
C138 22P
C139 22P
C132 12P
C137 120P
C140 0.001
Q41 2SC3772-3
L19 LA-227
C128 47P
R119 2.7K
R121 2.2K
L18 0.1μH
L20 0.82μH
D18 MA728
D19 MA728
R115 33K
R138 5.6K
R116 100
C130 0.001
C131 0.001
C142 0.001
D17 MA110
C141 0.001
D22 1SV172
R117 180
R120 8.2K
R123 150
R122 330
R126 12K
R127 82K
C146 470P
R118 330
Q37 2SB798
C145 470P
Hi-Power: 3.3 V Low1: 1 V
C136 0.001
Hi-Power: 6.8 V Low1: 2.8 V
C150 470P
Q35 FMS1
R131 4.7K
R129 220K
R132 3.3K
C154 0.01
C156 10
C147 470P
R128 22K
C148 4.7
R130 560K
C149 470P
Q36 2SC4081
Q38 2SA1576

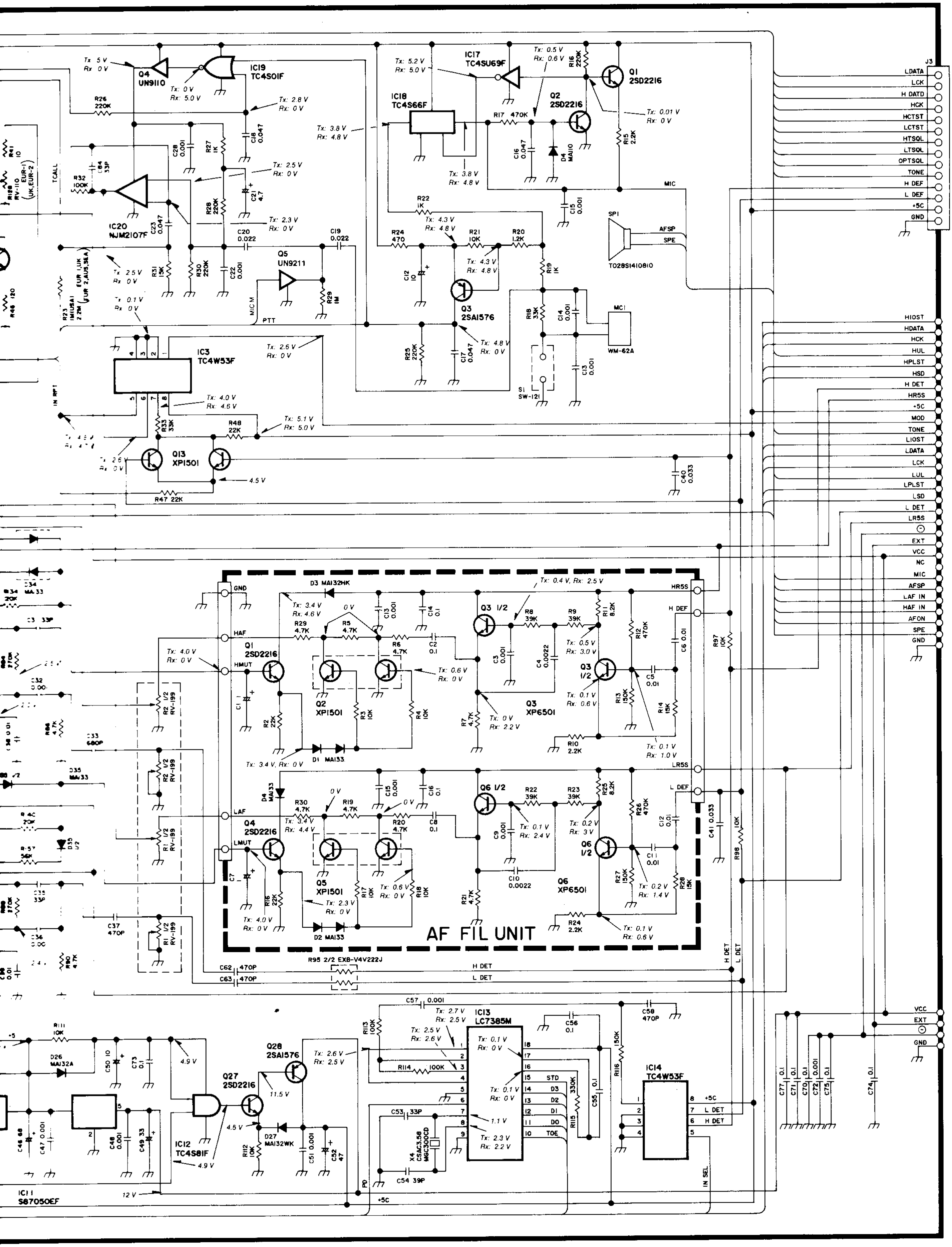

IC-W2E(EUR-1,UK)
D15 MA132K
D22 MA132A
IC-W2E(EUR-2)
D16 MA132HK
D22 MA132A
IC-W2A(USA)
D15 MA132HK
D16 MA132HK
D22 MA132A
IC-W2A(AUS)
D15 MA132K
D16 MA132HK
D22 MA132A
#07
IC-W2A(SEA)
D15 MA132WK
D16 MA132HK
D22 MA132A
#09


DS1 LD-BU5192J
IC1
SUB
HD404608B
X1 CSB800J201T
X2 CSB800J201T
R1 2/2 EXB-V4V153J
R4 RV-110
Q18 XP1210
Q19 XP1210
Q20 XP1210
Q21 XP1210
Q13 UN9210
Q24 UN9210
Q25 UN9110
Q23 UN9210
Q31 UN9210
Q32 UN9110
D6 MA132WA
D7 MA1S121
D8 MA132WA
D13 MA132WA
D14 MA132WA
D31 1/2 MA133
V MAIN
DTMF
S2 FUNC
S3
R81 EXB-V4V474J
R69 EXB-V4V474J

LOGIC UNIT

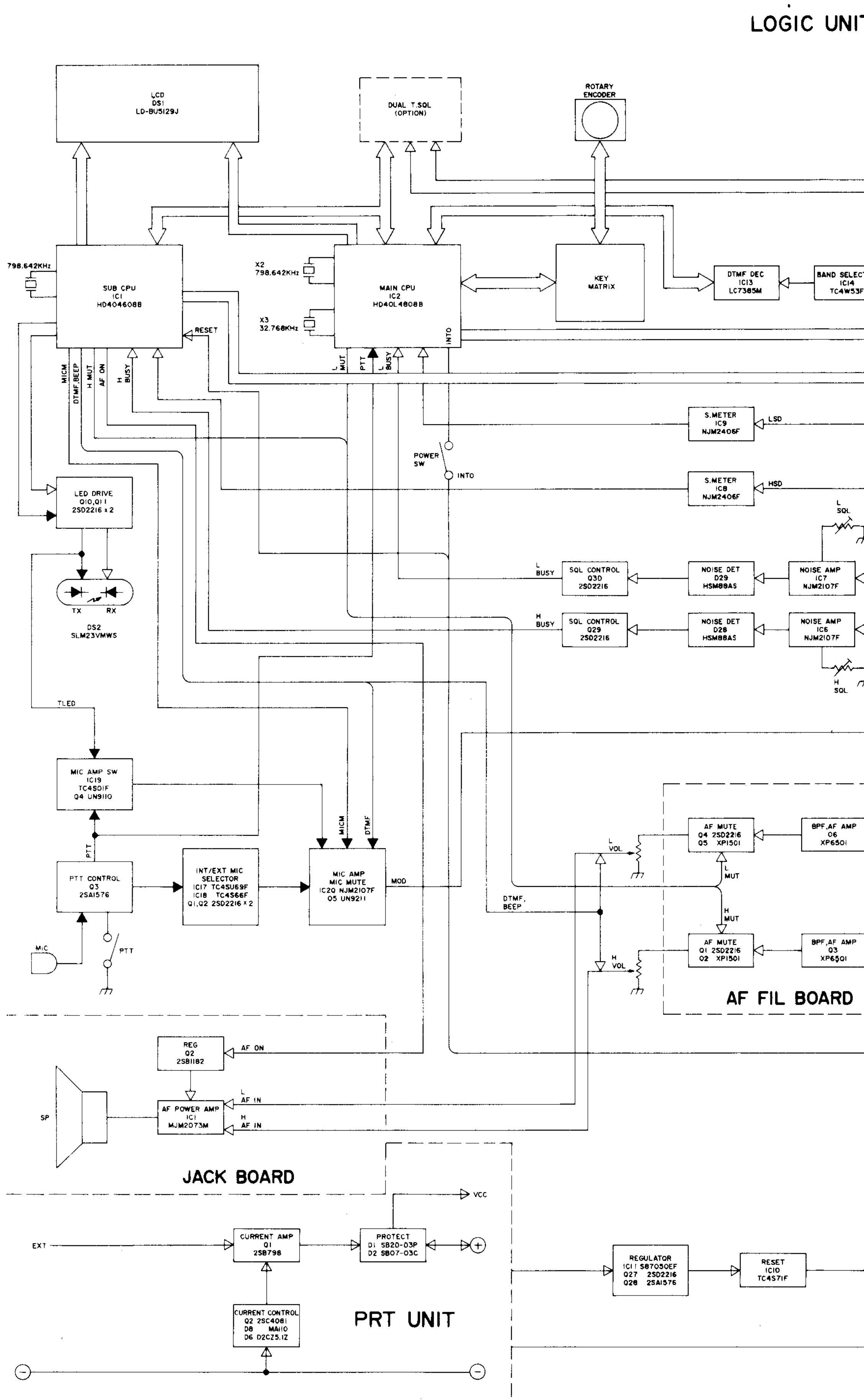


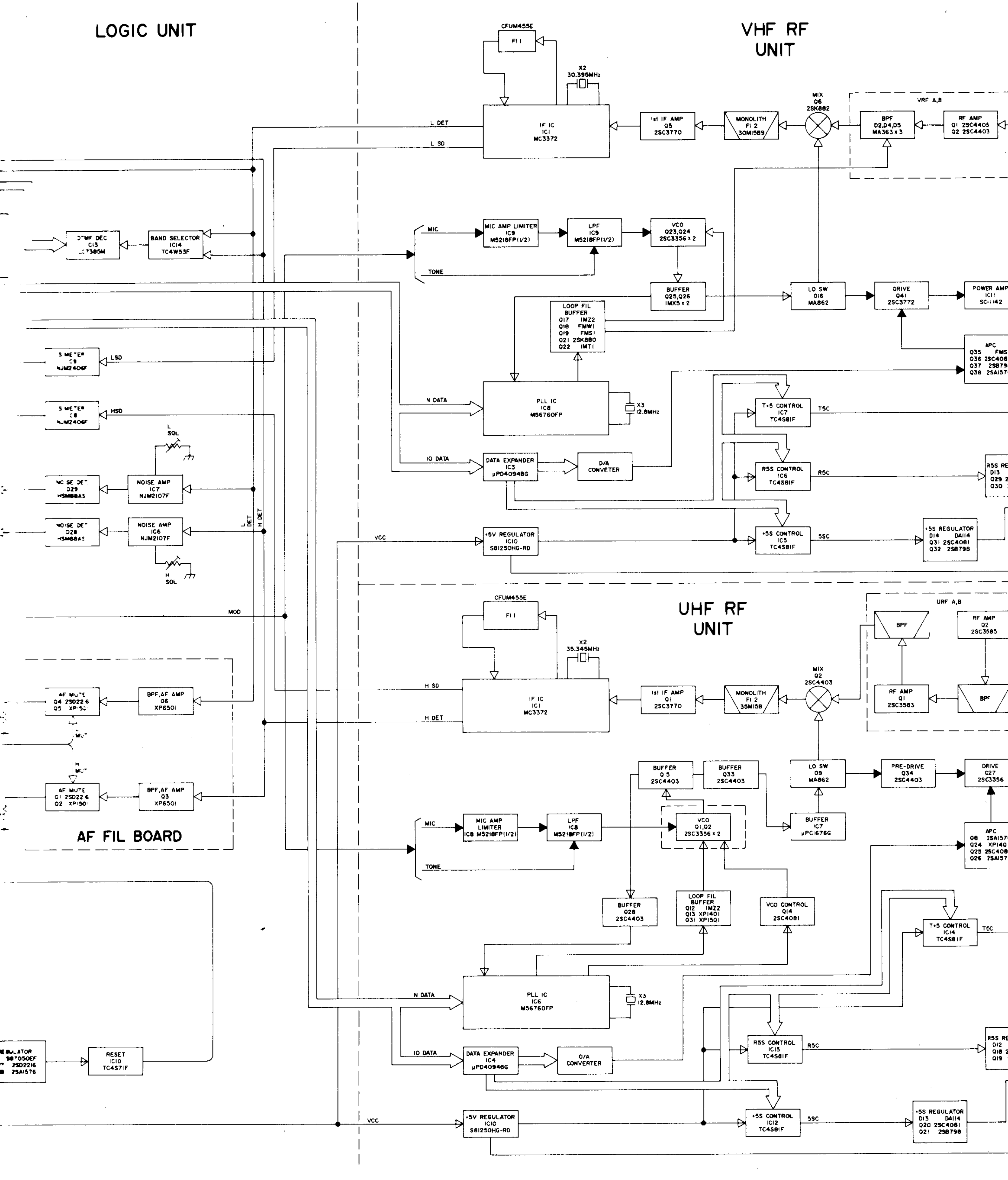
IC2 MAIN HD40L4808B
X2 CSB800J201T
X3 DT-26S 32.768KHz
Q25 UN9110
Q20 XP1210
Q21 XP1210
Q24 UN9210
Q23 UN9210
INITIAL MATRIX
R74 EXB-V4V473J
R76 EXB-V4V473J
R78 EXB-V4V473J
R69 EXB-V4V474J
R13 EXB-V4V153J
R145 EXB-V4V474J
D22 MA132A
IC8 NJM2406F
IC9 NJM2406F
Q26 2SB1462
BT1 VL2020-1VC
D25 1SS322
D36 MA728
POWER
MONI
Q10 2SD2216
Q11 2SD2216
Q12 2SD2216
DS2 SLM-23VMWS
DS3 SLM-13MWS
DS4 SLM-13MWS
D3 MA133
R93 EXB-V4V474J (EUR-1,UK,EUR-2)
R92 2/2 EXB-V4V224J
R91 2/2 EXB-V4V474J
IC15 TC4SU69F
IC16 TC4SU69F
D34 MA133
D30 MA132WK
D31 MA133
D28 HSM88AS
Q29 2SD2216
IC6 NJM2107F
D32 MA132WK
D33 MA133
Q30 2SD2216
IC7 NJM2107F
D29 HSM88AS
D35 MA133
IC10 TC4S71F
IC11 S87050EF
D26 MA132A
Q4 UN9110
IC20 NJM2107F
R128 RV-110 (UK,EUR-2)

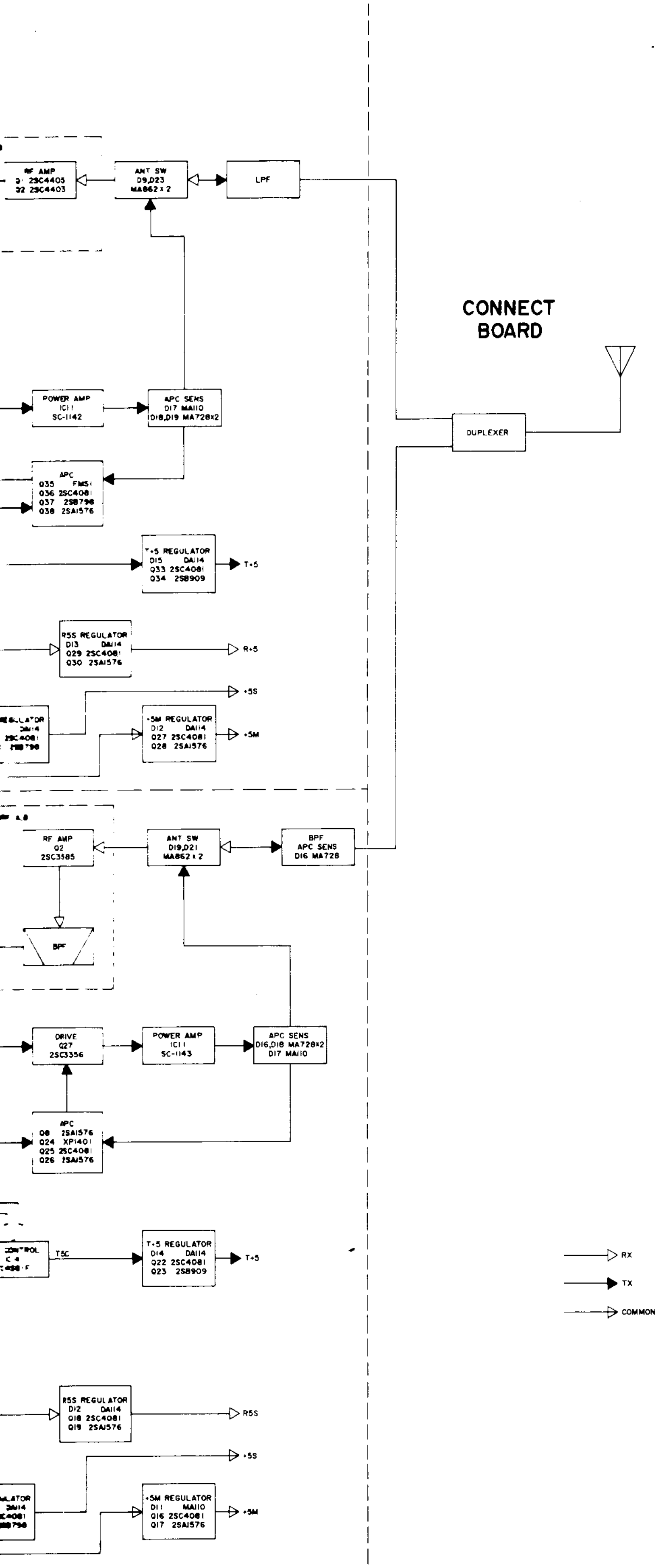


J3
LDATA
LCK
H DATD
HCK
HCTST
LCTST
HTSQL
LTSQL
OPTSQL
TONE
H DEF
L DEF
+5C
GND
IC17 TC4SU69F
IC18 TC4S66F
IC19 TC4S01F
IC20 NJM2107F
Q1 2SD2216
Q2 2SD2216
Q3 2SA1576
Q4 UN9110
Q5 UN9211
Q13 XP1501
IC3 TC4W53F
MIC
AFSP
SPE
SP1
T028S1410810
MC1
WM-62A
S1 SW-121
PTT
MIC M
HIOST
HDATA
HCK
HUL
HPLST
HSD
H DET
HR5S
+5C
MOD
TONE
LIOST
LDATA
LCK
LUL
LPLST
LSD
L DET
LR5S
EXT
VCC
NC
MIC
AFSP
LAF IN
HAF IN
AFON
SPE
GND
AF FIL UNIT
GND
HAF
HMUT
LAF
LMUT
HR5S
H DEF
LR5S
L DEF
D3 MA132HK
Q1 2SD2216
Q2 XP1501
Q3 XP6501
Q4 2SD2216
Q5 XP1501
Q6 XP6501
D1 MA133
D2 MA133
D4 MA133
R95 2/2 EXB-V4V222J
H DET
L DET
IC11 S87050EF
IC12 TC4S81F
IC13 LC7385M
IC14 TC4W53F
Q27 2SD2216
Q28 2SA1576
D26 MA132A
D27 MA132WK
X4 CSAC3.58 MGC300CD
STD
D3
D2
D1
D0
TOE
PD
IN SEL
+5C
L DET
H DET
VCC
EXT
GND

SECTION 10 BLOCK DIAGRAM




LOGIC UNIT
VHF RF UNIT
UHF RF UNIT
AF FIL BOARD
CFUM455E
FI 1
X2 30.395MHz
IF IC IC1 MC3372
1st IF AMP Q5 2SC3770
MONOLITH FI 2 30M15B9
MIX Q6 2SK882
VRF A,B
BPF D2,D4,D5 MA363 x 3
RF AMP Q1 2SC4403 Q2 2SC4403
L DET
L SQ
DTMF DEC IC13
BAND SELECTOR IC14 TC4W53F
MIC
TONE
MIC AMP LIMITER IC9 M5218FP(1/2)
LPF IC9 M5218FP(1/2)
VCO Q23,Q24 2SC3356 x 2
BUFFER Q25,Q26 IMX5 x 2
LOOP FIL BUFFER Q17 IMZ2 Q18 FMW1 Q19 FMS1 Q21 2SK880 Q22 IMT1
LO SW D16 MA862
DRIVE Q41 2SC3772
POWER AMP IC11 SC-1142
APC
S METER IC9 NJM2406F
LSD
S METER IC8 NJM2406F
HSD
N DATA
PLL IC IC8 M56760FP
X3 12.8MHz
T+5 CONTROL IC7 TC4S81F
T5C
L SQL
IO DATA
DATA EXPANDER IC3 μPD4094BG
D/A CONVETER
R5S CONTROL IC6 TC4S81F
R5C
NOISE DET D29 HSM88AS
NOISE AMP IC7 NJM2107F
NOISE DET D28 HSM88AS
NOISE AMP IC6 NJM2107F
L DET
H DET
VCC
+5V REGULATOR IC10 S81250HG-RD
+5S CONTROL IC5 TC4S81F
5SC
+5S REGULATOR D14 DA114 Q31 2SC4081 Q32 2SB798
H SQL
MOD
CFUM455E
FI 1
X2 35.345MHz
URF A,B
BPF
RF AMP Q2 2SC3585
H SQ
IF IC IC1 MC3372
1st IF AMP Q1 2SC3770
MONOLITH FI 2 35M15B
MIX Q2 2SC4403
RF AMP Q1 2SC3583
BPF
H DET
AF MUTE Q4 2SD2216 Q5 XP1501
BPF,AF AMP Q6 XP6501
L MUT
H MUT
AF MUTE Q1 2SD2216 Q2 XP1501
BPF,AF AMP Q3 XP6501
BUFFER Q15 2SC4403
BUFFER Q33 2SC4403
LO SW D9 MA862
PRE-DRIVE Q34 2SC4403
DRIVE Q27 2SC3356
BUFFER IC7 μPC1676G
VCO Q1,Q2 2SC3356 x 2
MIC
MIC AMP LIMITER IC8 M5218FP(1/2)
LPF IC8 M5218FP(1/2)
APC Q8 Q24 XP1401 Q25 Q26
TONE
BUFFER Q28 2SC4403
LOOP FIL BUFFER Q12 IMZ2 Q13 XP1401 Q31 XP1501
VCO CONTROL Q14 2SC4081
T+5 CONTROL IC14 TC4S81F
T5C
N DATA
PLL IC IC6 M56760FP
X3 12.8MHz
RESET IC10 TC4S71F
IO DATA
DATA EXPANDER IC4 μPD4094BG
D/A CONVERTER
R5S CONTROL IC13 TC4S81F
R5C
VCC
+5V REGULATOR IC10 S81250HG-RD
+5S CONTROL IC12 TC4S81F
5SC
+5S REGULATOR D13 DA114 Q20 2SC4081 Q21 2SB798


CONNECT
BOARD
RF AMP
ANT SW
D9,D23
MA862 x 2
LPF
POWER AMP
IC11
SC-1142
APC SENS
D17 MA110
D18,D19 MA728x2
DUPLEXER
APC
Q35 FMS1
Q36 2SC4081
Q37 2SB798
Q38 2SA1576
T+5 REGULATOR
D15 DA114
Q33 2SC4081
Q34 2SB909
T+5
R5S REGULATOR
D13 DA114
Q29 2SC4081
Q30 2SA1576
R+5
+5S
+5M REGULATOR
D12 DA114
Q27 2SC4081
Q28 2SA1576
+5M
RF AMP
Q2
2SC3585
ANT SW
D19,D21
MA862 x 2
BPF
APC SENS
D16 MA728
BPF
DRIVE
Q27
2SC3356
POWER AMP
IC11
SC-1143
APC SENS
D16,D18 MA728x2
D17 MA110
APC
Q8 2SA1576
Q24 XP1401
Q25 2SC4081
Q26 2SA1576
T5C
T+5 REGULATOR
D14 DA114
Q22 2SC4081
Q23 2SB909
T+5
R5S REGULATOR
D12 DA114
Q18 2SC4081
Q19 2SA1576
R5S
+5S
+5M REGULATOR
D11 MA110
Q16 2SC4081
Q17 2SA1576
+5M
RX
TX
COMMON

Icom Inc.

6-9-16, Kamihigashi, Hirano-ku, Osaka 547, Japan
Phone: 06 793 5302
Fax : 06 793 0013
Telex : 05277822 ICOMTR J

Icom America Inc.

〈Corporate Headquarters〉
2380 116th Avenue N.E., Bellevue, WA 98004, U.S.A.
Phone: (206) 454-8155
Fax : (206) 454-1509
Telex : 152210 ICOM AMER BVUE

〈Customer Service〉
Phone: (206) 454-7619

〈Regional Customer Service Center〉
18102 Sky Park South, Suite 52-B, Irvine, CA 92714, U.S.A.
Phone: (714) 852-8026
Fax : (714) 852-8716

Icom Canada

A Division of Icom America Inc.
3071 #5 Road, Unit 9, Richmond, B.C., V6X 2T4, Canada
Phone: (604) 273-7400
Fax : (604) 273-1900

Icom (Europe) GmbH

Communication Equipment
Himmelgeister Str. 100, 40225 Düsseldorf 1, Germany
Phone: 0211 346047
Fax : 0211 333639

Icom (Australia) Pty. Ltd.

A.C.N 006 092 575
7 Duke Street, Windsor, Victoria, 3181, Australia
Phone: 03 529 7582
Fax : 03 529 8485

Icom (UK) Ltd.

Unit 9, Sea St., Herne Bay, Kent, CT6 8LD, U.K.
Phone: 0227 741741
Fax : 0227 741742
Telex : 965179 ICOM G

Icom France S.a

Zac de la Plaine, Rue Brindejonc des Moulinais
BP 5804, 31505 Toulouse Cedex, France
Phone : 61. 36. 03. 03
Fax : 61. 34. 05. 91
Telex : 521515 ICOM FRA

Count on us!

Icom Inc.
6-9-16, Kamihigashi, Hirano-ku, Osaka 547, Japan

A-5143F-S-②
Printed in Japan